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BRODIX'S AMERICAN AND ENGLISH PATENT CASES.

VOL. XVI.

DECISIONS

ON THE LAW OF

PATENTS FOR INVENTIONS

RENDERED BY

THE UNITED STATES SUPREME COURT

FROM THE BEGINNING.

THIS VOLUME FROM

114 U. S. - - - - - 120 U. S.
1884 1886.

EDITED AND ANNOTATED

BY

WOODBURY LOWERY.

WASHINGTON, D. C.

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EXPLANATION OF NOTES.

The Text of the Opinion.

The text of the opinion of the court is taken wholly from the record, and not from the official reporter. The reason for this is that the record is the original source from which the reporter himself obtains his matter ; that it is complete, no cases decided by the court being omitted therefrom ; that on application to the clerk of the court for a certified copy of an opinion, it is the copy of the opinion as it appears in the record, and not as printed in the official report that he furnishes.

Prominent among the advantages secured by printing the record, is the fact that the statement of the case, involving all those facts which the court considers material to the understanding of its opinion is made by the court itself, strictly in view of its decision, concisely and judicially, whereas the official reporters, Wallace and Otto, have omitted whole pages of the statement as made by the court, substituting their own, or have so amended and varied the court's statement as to make it practically a new one. The case of Packing Company Cases, reported in volume 14 p. 49, is a notable example, on consulting which the foot-notes appended will be found to point out the variation of the official reporter from the original record.

It will also be observed that this practice of these reporters has often been the cause of omitting in their reports the introductory part of the opinion as given in the record, supplying it from their own point of view and actually beginning the report of the opinion at an intermediate point of the record.

The text in this work has been prepared from printed certified copies of the record, and has undergone a second comparison while in type before printing, made directly with the original record in the Supreme Court, giving an assurance that no effort has been spared to secure accuracy.

It has further been compared with the officially published reports and the

divergences of the latter from the record pointed out in foot-notes to each case where they occur, in justification of the course pursued by the editor, and for the convenience of the profession.

The Syllabi, or The Head-Notes

The head-notes have been prepared with care and considerable elaboration, the editor deeming it more convenient to the profession that he should err on the side of too great minutia in calling their attention even to what may be regarded as *dicta* of the court. At the end of each head-note will be found, between brackets, the page of the opinion of which it is a digest. The head-notes are numbered consecutively, and at the end of each case there will be found under the corresponding number of the head-note a note of Supreme Court Patent Cases, in chronological order, relative to the subject-matter of the head-note.

The Annotations, or Notes at ending of Case.

Notes at ending of case are of three kinds: those in the form of notes to the head-notes; those relating to the patent in suit; and those relating to cases in which the particular case reported has been cited.

Notes to the head-notes. These consist of Supreme Court Patent Cases, arranged in chronological order, in which the substance of the head-note has been restated, affirmed, or applied, as the case may be; these have been brought down to the latest decisions of the court accessible at the date of printing the volume.

The patent in suit is next given with its reissues, if any, followed by a chronological list of all reported Federal suits in which the patent has been involved.

Citations of the particular opinion. Then follows a list of those cases in which the opinion reported has been cited. This list includes Federal, State, and Canadian Cases, opinions of the Attorney-General, and of the Commissioner of Patents, and the latest text-books, Curtis, 4th Edit., Walker, Merwin, and Abbott.

All the lists are chronological in arrangement and in the list of citations the dates are appended.

EXPLANATION OF NOTES.

v

Additional References, &c.

To facilitate the finding of any case appearing in the notes, not only is the original report given, but also volume and page of Robb, Fisher, Banning and Arden, and others in which it is reprinted.

Both in the opinion and arguments the rule has been followed of adding the *names* to cases cited by page and volume only, these additions to the text being included in brackets.

Blank lined spaces after each note and a blank page at the end of each case are left for the insertion of additional citations and of general notes.

Tables.

There are added a number of tables and two indexes for ready reference. These are Tables of Cases, Reference Table of Cases, Table of Patents in Suit, of Cases Cited, of Abbreviations, of Names of Justices, of Names of Counsel, an Index Digest, and a Digest of Notes.

Reference is made throughout the work to the volume and page of the English cases already published as part of this series, wherever they occur.

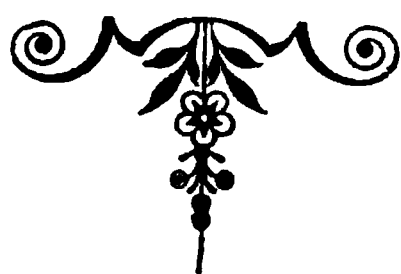
WOODBURY LOWERY.

WASHINGTON, D. C.

April 1, 1890.

TABLE OF CONTENTS.

	PAGE
EXPLANATION OF NOTES	iii
ALPHABETICAL TABLE OF CASES	ix
REFERENCE TABLE OF CASES	xv
REFERENCE TABLE OF COMPARATIVE PAGES	xvii
TABLE OF PATENTS IN SUIT	xxvi
TABLE OF CITATIONS	xxix
TABLE OF ABBREVIATIONS	xlvi
TABLE OF NAMES OF JUSTICES	lii
TABLE OF NAMES OF COUNSEL	liii
CASES REPORTED	1-586
INDEX DIGEST	587
INDEX TO NOTES	614



ALPHABETICAL TABLE OF CASES

REPORTED IN THIS VOLUME.

	PAGE.
ANSONIA BRASS AND COPPER CO., WESTERN ELECTRIC MNFG. CO. v.	94
ARTIFICIAL STONE PAVING CO. See CALIFORNIA ARTIFICIAL STONE PAVING CO.	469
ATWATER MNFG. CO., BEECHER MNFG. CO. v.	106
BEECHER MNFG. CO. v. ATWATER MNFG. CO. 114 U. S. 523-524. Oct. Term, 1884.	106
[Bk. 29, L. ed. 232 ; 31 O. G. 1306.]	
Reversing Atwater Mnfg. Co. v. Beecher Mnfg. Co., 8 Fed. Rep. 608.	
<i>Particular patent construed. Reissue for matter expressly disclaimed. Want of invention.</i>	
BEECHER MNFG. CO., CLARK v.	120
BROOKLYN CROSS-TOWN R. R. CO., STEPHENSON v.	63
BROOMALL, EACHUS v.	176
BROWN v. DAVIS. 116 U. S. 237-252. Oct. Term, 1885.	212
[Bk. 29, L. ed. 659 ; 34 O. G. 435.]	
Reversing Davis v. Brown, 19 Blatch. 263.	
<i>Particular reissued patent. Complete invention. Equivalent. "Substantially as described." Construction of claim.</i>	
BUTTERWORTH v. HILL. 114 U. S. 128-133. Oct. Term, 1884.	51
[Bk. 29, L. ed. 119 ; 31 O. G. 1043.]	
<i>Service of process, R. S. sec. 739. Commissioner of Patents--where found. Acceptance of service which is not a consent to jurisdiction.</i>	
CALIFORNIA ARTIFICIAL STONE PAVING CO. v. SCHALICKE. 119 U. S. 401-407. Oct. Term, 1886.	469
[Bk. 30, L. ed. 471 ; 38 O. G. 329.]	
<i>Particular patent construed and not infringed.</i>	
CANTRELL v. WALLICK. 117 U. S. 689-696. Oct. Term, 1885.	322
[Bk. 29, L. ed. 1017 ; 35 O. G. 871.]	
Affirming <i>Ibid</i> , 12 Fed. Rep. 790.	
<i>Particular patent infringed. Combination. Novelty. Patentability. Improvement. Estoppel. Prior use, how proven.</i>	

	PAGE.
CARRIGAN, SHEPARD <i>v.</i>	235
CARTRIDGE CO. See UNITED STATES RIFLE AND CARTRIDGE CO.	
CLARK <i>v.</i> BEECHER MNFG. CO. 115 U. S. 79-87. Oct. Term, 1884.	120
[Bk. 29, L. ed. 352; 31 O. G. 1169.]	
Affirming <i>Ibid</i> , 7 Fed. Rep. 816.	
<i>Particular patent construed, limited, and not infringed.</i>	
CLARK <i>v.</i> WOOSTER. 119 U. S. 822-826. Oct. Term, 1886.	426
[Bk. 30, L. ed. 392; 37 O. G. 1477.]	
Affirming <i>Wooster v. Clark</i> , 21 O. G. 264.	
<i>Patent about to expire. Equity jurisdiction. Injunction. Original patent in evidence in suit on reissue. License fee. Measure of damages.</i>	
CLARK POMACE HOLDER CO. <i>v.</i> FERGUSON. 119 U. S. 335-338. Oct. Term, 1886.	441
[Bk. 30, L. ed. 406; 37 O. G. 1479.]	
Affirming <i>Ibid</i> , 21 Blatch. 376.	
<i>Particular patent. Absence of invention. Mechanical skill.</i>	
COMMISSIONER OF PATENTS <i>v.</i> HILL. See BUTTERWORTH <i>v.</i> HILL.	
CONSOLIDATED SAFETY-VALVE CO. <i>v.</i> KUNKLE. 119 U. S. 45-46. Oct. Term, 1886.	391
[Bk. 30, L. ed. 302; 37 O. G. 1003.]	
Affirming <i>Ibid</i> , 14 Fed. Rep. 732.	
<i>Particular patent construed, limited, and not infringed.</i>	
DAVIS, BROWN <i>v.</i>	212
DE COMEAU, FIELD <i>v.</i>	204
DUNBAR, WHITE <i>v.</i>	397
EACHUS <i>v.</i> BROOMALL. 115 U. S. 429-439. Oct. Term, 1885.	176
[Bk. 29 L. ed. 419; 33 O. G. 1265.]	
<i>Identity of invention. Admissible evidence of prior knowledge and use. Particular reissued patent.</i>	
ELECTRIC MNFG. CO. See WESTERN ELECTRIC MNFG. CO. <i>v.</i> ANSONIA BRASS AND COPPER CO.	
ELECTRIC RAILROAD SIGNAL CO. <i>v.</i> HALL RAILWAY SIGNAL CO. 114 U. S. 87-103. Oct. Term, 1884.	1
[Bk. 29, L. ed. 96; 31 O. G. 515.]	
Affirming <i>Ibid</i> , 6 Fed. Rep. 603.	
<i>Particular patent construed, limited, and held not infringed.</i>	
FERGUEON, CLARK POMACE HOLDER CO. <i>v.</i>	441
FIELD <i>v.</i> DE COMEAU. 116 U. S. 187-190. Oct. Term, 1885.	204
[Bk. 29, L. ed. 596; 34 O. G. 559.]	
Affirming <i>Ibid</i> , 4 Ban. & Ard. 40.	
<i>Particular patent construed and not infringed.</i>	

ALPHABETICAL TABLE OF CASES.

xi

	PAGE
FOREE, MILLER <i>v.</i>	193
FURST & BRADLEY MNFG. CO., NEWTON <i>v.</i>	450
GARDNER <i>v.</i> HERZ. 118 U. S. 180-198. Oct. Term, 1885.	368
[Bk. 30, L. ed. 158 ; 35 O. G. 999.]	
Affirming <i>Ibid</i> , 20 Blatch. 538.	
<i>Particular patent. Absence of invention. New use. Defences to infringement. "New" R. S. sec. 4886.</i>	
GRANT, KEYES <i>v.</i>	346
GREENLEAF, YALE LOCK MNFG. CO. <i>v.</i>	303
GRIER <i>v.</i> WILT. 120 U. S. 412-430. Oct. Term, 1888.	558
[Bk. 30, L. ed. 712 ; 38 O. G. 1365.]	
Reversing <i>Wilt v. Grier</i> , 5 Fed. Rep. 450.	
<i>Particular patent not infringed. Mechanical combination is not a process. Construction of claims. State of the art. Evidence.</i>	
HALL RAILWAY SIGNAL CO., ELECTRIC RAILROAD SIGNAL CO. <i>v.</i>	1
HAPGOOD <i>v.</i> HEWITT. 119 U. S. 226-234. Oct. Term, 1886.	412
[Bk. 30, L. ed. 369 ; 37 O. G. 1247.]	
Affirming <i>Ibid</i> , 11 Biss. 184.	
<i>Employer and employé—inventor. License. Injunction. Equity relief.</i>	
HARTSHORN <i>v.</i> SAGINAW BARREL CO. 119 U. S. 664-679. Oct. Term, 1886.	530
[Bk. 30, L. ed. 539 ; 38 O. G. 540.]	
<i>Particular patents. Void reissue claim. Absence of invention. Mechanical equivalents.</i>	
HERZ, GARDNER <i>v.</i>	368
HEWITT, HAPGOOD <i>v.</i>	412
HILL, BUTTERWORTH <i>v.</i>	51
IVES <i>v.</i> SARGENT. 119 U. S. 652-663. Oct. Term, 1886	512
[Bk. 30, L. ed. 544 ; 38 O. G. 781.]	
Affirming <i>Ibid</i> , 21 Blatch. 417.	
<i>Particular reissued patent. Reissue with broader claims. Mistake of solicitor. New matter.</i>	
KEYES <i>v.</i> GRANT. 118 U. S. 25-37. Oct. Term, 1885	346
[Bk. 30, L. ed. 54 ; 35 O. G. 747.]	
<i>Jury trial. Identity of patent with prior publication. When a question of law and when of fact. Evidence.</i>	
KUNKLE, CONSOLIDATED SAFETY-VALVE CO. <i>v.</i>	391
MANARD, PRESTON <i>v.</i>	249
MANUFACTURING CO. See BEECHER MNFG. CO. <i>v.</i> ATWATER MNFG. CO.	

	PAGE
MANUFACTURING CO. See WESTERN ELECTRIC MNFG. CO. <i>r.</i> . ANSONIA BRASS AND COPPER CO.	
MANUFACTURING CO. See YALE LOCK MNFG. CO.	
MILLER <i>v.</i> FOREE. 116 U. S. 22-28. Oct. Term, 1885	193
[Bk. 29, L. ed. 552 ; 33 O. G. 1497.]	
<i>Particular reissued patent. Process. What is not an abandoned experiment. Prior invention.</i>	
NEWTON <i>v.</i> FURST AND BRADLEY MNFG. CO. 119 U. S. 873-885. Oct. Term, 1886	450
[Bk. 30, L. ed. 442; 38 O. G. 104.]	
Affirming <i>Ibid</i> , 11 Biss. 405.	
<i>Particular reissued patent. Inadvertence and mistake. Invalid reissue claim.</i>	
PAVING CO. See CALIFORNIA ARTIFICIAL STONE PAVING CO.	
POMACE HOLDER CO. See CLARK POMACE HOLDER CO.	
PRESTON <i>v.</i> MANARD. 116 U. S. 661-664. Oct. Term, 1885. . . .	249
[Bk. 29, L. ed. 763; 34 O. G. 1507.]	
<i>Particular reissued patent. Want of novelty. Invention.</i>	
RAILROAD SIGNAL CO. See ELECTRIC RAILROAD SIGNAL CO. <i>v.</i> HALL RY. SIGNAL CO.	
REIHER, WOLLENSAK <i>v.</i>	145
REIHER, WOLLENSAK <i>v.</i>	162
RIESSNER, SHARP <i>v.</i>	501
RIFLE AND CARTRIDGE CO. See UNITED STATES RIFLE AND CARTRIDGE CO.	
ROBINSON, SUTTER <i>v.</i>	481
SAFETY-VALVE CO. See CONSOLIDATED SAFETY-VALVE CO.	
SAGINAW BARREL CO., HARTSHORN <i>v.</i>	530
SARGENT, IVES <i>v.</i>	512
SARGENT, YALE LOCK MNFG. CO. <i>v.</i>	264
SARGENT, YALE LOCK MNFG. CO. <i>v.</i>	275
SCHALICKE, CALIFORNIA ARTIFICIAL STONE PAVING CO. <i>v.</i> . . .	469
SHARP <i>v.</i> RIESSNER. 119 U. S. 631-637. Oct. Term, 1886. . . .	501
[Bk. 30, L. ed. 507; 38 O. G. 418.]	
Affirming <i>Ibid</i> , 15 Fed. Rep. 919.	
<i>Particular patent construed, limited, and not infringed.</i>	
SHEPARD <i>v.</i> CARRIGAN. 116 U. S. 593-598. Oct. Term, 1885. .	235
[Bk. 29, L. ed. 723; 34 O. G. 1157.]	
<i>Particular patent. Disclaimer. File-wrapper and contents. Limitations imposed by Patent Office prevent reissue with broader claim. Patentee bound by his claim.</i>	

ALPHABETICAL TABLE OF CASES.

xiii

	PAGE.
SIGNAL CO. See ELECTRIC RAILROAD SIGNAL CO. v. HALL RY. SIGNAL CO.	
STEPHENSON v. BROOKLYN CROSS-TOWN R. R. CO. 114 U. S. 149- 158. Oct. Term, 1884	63
[Bk. 29, L. ed. 58 ; 31 O. G. 263.]	
Affirming <i>Ibid</i> , 19 Blatch. 473.	
<i>Particular patents construed. Want of invention. Aggrega- tion. Combination. Patentability.</i>	
STONE PAVING CO. See CALIFORNIA ARTIFICIAL STONE PAV- ING CO.	
SUTTER v. ROBINSON. 119 U. S. 530-542. Oct. Term, 1886 . . .	481
[Bk. 30, L. ed. 492; 38 O. G. 230.]	
Reversing Robinson v. Sutter, 10 Biss. 100, and <i>Ibid</i> , 11 Fed. Rep. 798.	
<i>Particular patent. File-wrapper and contents. Construction of patent in view of limitations imposed by Patent Office.</i>	
THOMSON v. WOOSTER. 114 U. S. 104-120. Oct. Term, 1884 . . .	28
[Bk. 29, L. ed. 105; 31 O. G. 913.]	
<i>Decree pro confesso. Estoppel. Reissue. Allegations in bill. Original patent in evidence. Accounting—estimation of profits. Affidavits as grounds to reopen case. Practice. Equity rule 18.</i>	
UNITED STATES RIFLE AND CARTRIDGE CO. v. WHITNEY ARMS CO. 118 U. S. 22-25. Oct. Term, 1885	337
[Bk. 30, L. ed. 53 ; 35 O. G. 873.]	
Affirming <i>Ibid</i> , 14 Blatch. 94.	
<i>Particular patent. Abandonment. Conclusiveness of Commis- sioner's decision. Abandonment subsequent to application.</i>	
VALVE CO. See CONSOLIDATED SAFETY-VALVE CO.	
WALLICK, CANTRELL v.	322
WESTERN ELECTRIC MFG. CO. v. ANSONIA BRASS AND COPPER CO. 114 U. S. 447-453. Oct. Term, 1884	94
[Bk. 29, L. ed. 210 ; 31 O. G. 1305.]	
Affirming <i>Ibid</i> , 9 Fed. Rep. 706.	
<i>Process and product—validity. Particular patent construed and held wanting in novelty and invention. Vague description of matter not claimed confers no protection.</i>	
WHITE v. DUNBAR. 119 U. S. 47-52. Oct. Term, 1886	397
[Bk. 30, L. ed. 303; 37 O. G. 1002.]	
Reversing Dunbar v. White, 4 Woods, 116.	
<i>Particular reissued patent. Invalid expansion. Statement of ob- ject of invention. Construction of claim. Intervening rights prior to reissue.</i>	

	PAGE
WHITNEY ARMS CO., UNITED STATES RIFLE AND CARTRIDGE CO. v.	337
WILT, GRIER, v.	558
WOLLENSAK v. REIHER. 115 U. S. 87-96. Oct. Term, 1884 . . .	145
[Bk. 29, L. ed. 355; 31 O. G. 1303.]	
<i>Particular patent construed, limited, and not infringed.</i>	
WOLLENSAK v. REIHER. 115 U. S. 96-102. Oct. Term, 1884 . .	162
[Bk. 29, L. ed. 350.]	
Affirming <i>Ibid</i> , 22 Fed. Rep. 651.	
<i>Particular reissued patent. Multiplication of reissue claims. Unreasonable delay in reissuing. Expanded reissue claims. Laches in reissuing, a question of law.</i>	
WOOSTER, CLARK v.	426
WOOSTER, THOMSON v.	28
YALE LOCK MNFG. CO. v. GREENLEAF. 117 U. S. 554-559. Oct. Term, 1885	303
[Bk. 29, L. ed. 952; 35 O. G. 386.]	
Reversing <i>Greenleaf v. Yale Lock Mnfg. Co.</i> , 17 Blatch. 253.	
<i>Particular reissued patent. Novelty. Mechanical skill. Construction of patents.</i>	
YALE LOCK MNFG. CO. v. SARGENT. 117 U. S. 373-378. Oct. Term, 1885	264
[Bk. 29, L. ed. 950; 35 O. G. 385.]	
Reversing <i>Sargent v. Yale Lock Co.</i> , 17 Blatch. 249.	
<i>Particular patent construed and not infringed.</i>	
YALE LOCK MNFG. CO. v. SARGENT. 117 U. S. 536-554. Oct. Term, 1885	275
[Bk. 29, L. ed. 954; 35 O. G. 497.]	
Modifying <i>Sargent v. Yale Lock Mnfg. Co.</i> , 17 Blatch. 244 and 249.	
<i>Particular reissue patent infringed. Co-partner. Measure of damages in absence of license-fee, &c. Delay in filing disclaimer. Costs.</i>	

REFERENCE TABLE OF CASES

DECIDED IN U. S. SUPREME COURT, AND REPORTED IN THIS VOLUME.

Date. Oct. Term.	Brodix's Am. & Eng. Patent Cases. Title of Case.	Vol. XVI Page.	Official Reports of U. S. Supreme Court.	Lawyers' Edition of U. S. Supreme Court Reports.	Official Gazette of U. S. Patent Office.
1884.	Electric R. R. Signal Co. v. Hall Ry. Signal Co.	1	114 U. S. 87.	Bk. 29, L. ed. 96.	31 O. G. 515.
1884.	Thomson v. Wooster.	28	114 U. S. 104.	Bk. 29, L. ed. 105.	31 O. G. 913.
1884.	Butterworth v. Hill.	51	114 U. S. 128.	Bk. 29, L. ed. 119.	31 O. G. 1043.
1884.	Stephenson v. Brooklyn R. R. Co.	63	114 U. S. 149.	Bk. 29, L. ed. 58.	31 O. G. 263.
1884.	Western Electric Co. v. Ansonia Brass Co.	94	114 U. S. 447.	Bk. 29, L. ed. 210.	31 O. G. 1305.
1884.	Beecher Mfg. Co. v. Atwater Mfg. Co.	106	114 U. S. 523.	Bk. 29, L. ed. 232.	31 O. G. 1306.
1884.	Clark v. Beecher Mfg. Co.	120	115 U. S. 79.	Bk. 29, L. ed. 352.	31 O. G. 1169.
1884.	Wollensak v. Reiher.	145	115 U. S. 87.	Bk. 29, L. ed. 355.	31 O. G. 1303.
1884.	Wollensak v. Reiher.	162	115 U. S. 96.	Bk. 29, L. ed. 350.	
1885.	Eachus v. Broomall.	176	115 U. S. 429.	Bk. 29, L. ed. 419.	33 O. G. 1265.
1885.	Miller v. Foree.	193	116 U. S. 22.	Bk. 29, L. ed. 552.	33 O. G. 1497.
1885.	Field v. De Comeau.	204	116 U. S. 187.	Bk. 29, L. ed. 596.	34 O. G. 559.
1885.	Brown v. Davis.	212	116 U. S. 237.	Bk. 29, L. ed. 659.	34 O. G. 435.
1885.	Shepard v. Carrigan.	235	116 U. S. 593.	Bk. 29, L. ed. 723.	34 O. G. 1157.
1885.	Preston v. Manard.	249	116 U. S. 661.	Bk. 29, L. ed. 763.	34 O. G. 1507.
1885.	Yale Lock Mfg. Co. v. Sargent.	264	117 U. S. 373.	Bk. 29, L. ed. 950.	35 O. G. 385.
1885.	Yale Lock Mfg. Co. v. Sargent.	275	117 U. S. 536.	Bk. 29, L. ed. 954.	35 O. G. 497.
1885.	Yale Lock Mfg. Co. v. Greenleaf.	303	117 U. S. 554.	Bk. 29, L. ed. 952.	35 O. G. 396.
1885.	Cantrell v. Wallick.	322	117 U. S. 689.	Bk. 29, L. ed. 1017.	35 O. G. 871.
1885.	U. S. Rifle and Cartridge Co. v. Whitney Arms Co.	337	118 U. S. 22.	Bk. 30, L. ed. 53.	35 O. G. 873.
1885.	Keyes v. Grant.	346	118 U. S. 25.	Bk. 30, L. ed. 54.	35 O. G. 747.
1885.	Gardner v. Herz.	368	118 U. S. 180.	Bk. 30, L. ed. 158.	35 O. G. 999.

REFERENCE TABLE OF CASES—Continued.

Date.	Brodlr's Am. & Eng. Patent Cases. Title of Case.	Vol. XVI Page.	Official Reports of U. S. Supreme Court.	Lawyers' Edition of U. S. Supreme Court Reports.	Official Gazette of U. S. Patent Office.
1886.	Consolidated Safety-Valve Co. v. Kunkle.	391	119 U. S. 45.	Bk. 30, L. ed. 302.	37 O. G. 1003.
1886.	White v. Dunbar.	397	119 U. S. 47.	Bk. 30, L. ed. 303.	37 O. G. 1002.
1886.	Hapgood v. Hewitt.	412	119 U. S. 226.	Bk. 30, L. ed. 369.	37 O. G. 1247.
1886.	Clark v. Wooster.	426	119 U. S. 322.	Bk. 30, L. ed. 392.	37 O. G. 1477.
1886.	Clark Pomace-Holder Co. v. Ferguson.	441	119 U. S. 335.	Bk. 30, L. ed. 406.	37 O. G. 1478.
1886.	Newton v. Furst & Bradley Mfg. Co.	450	119 U. S. 373.	Bk. 30, L. ed. 442.	38 O. G. 164.
1886.	California Artificial Stone Pav. Co. v. Schalicke.	469	119 U. S. 401.	Bk. 30, L. ed. 471.	38 O. G. 329.
1886.	Sutter v. Robinson.	481	119 U. S. 530.	Bk. 30, L. ed. 492.	38 O. G. 230.
1886.	Sharp v. Riessner.	501	119 U. S. 631.	Bk. 30, L. ed. 507.	38 O. G. 418.
1886.	Ives v. Sargent.	512	119 U. S. 652.	Bk. 30, L. ed. 544.	38 O. G. 781.
1886.	Hartshorn v. Saginaw Barrel Co.	530	119 U. S. 664.	Bk. 30, L. ed. 539.	38 O. G. 540.
1886.	Grier v. Wilt.	558	120 U. S. 412	Bk. 30, L. ed. 712.	38 O. G. 1365.

REFERENCE TABLE OF COMPARATIVE PAGES
OF THE OFFICIAL REPORTS AND THIS VOLUME.

The object of comparing the pages in these cases is for convenience of reference showing where the text in the opinion of the court on each page of the Official Report is found in this edition, or if an attorney wishes to cite the Official Reports while using these volumes, he can readily do so by turning to this table and finding on what page in the official edition any page of the Opinion of the Court in this volume may be found.

In making this comparison, out of justice to ourselves, where we have inserted new material, such as drawings, specifications, arguments of counsel, statements, and parts of the opinion from the records which are not found in the Official edition, we have so indicated.

As an example in the use of this table take the case of Powder Co. v. Powder Works, in volume 12, which begins in 98 U. S. on page 126—see first column; in our volume, page 201—see third column; the opinion of the court begins in U. S. on page 133—see second column; in our volume, page 218—see fourth column, and thus through the opinion each page is compared. We have inserted in this volume many drawings and specifications which are not found in the Official Reports, and omissions in the consecutive numbering of the pages can be accounted for in the same manner.

NOTE—Pages containing drawings marked D.
“ “ statement “ S.

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Electric R. R. Signal Co. v. Hall Railway Signal Co.,	114 U. S.			
“ “	87	87-89	1	6
“ “		(88) D		7 D
“ “		(88) D		8 D
“ “		89-90		9
“ “		90-91		10
“ “		91-93		11
“ “		93-94		12
“ “		(92) D		13 D
“ “		(92) D		14 D
“ “		94-95		15
“ “		95		16
“ “		95-96		17
“ “		96-97		18
“ “		97-98		19
“ “		98-99		20
“ “		99-100		21
“ “		100-102		22
“ “		(101) D		23 D

xviii REFERENCE TABLE OF COMPARATIVE PAGES.

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Electric R. R. Signal Co. v. Hall Rail- way Signal Co.,	114 U. S.	(101) D		24 D
“ “		102		25
“ “		102-103		26
Thomson v. Wooster,	104		28	
“ “				32
“ “		104-105 S		33
“ “		105-106 S		34
“ “		106-107 S		35
“ “		107-109		36
“ “		109-110		37
“ “		110-111		38
“ “		111-112		39
“ “		112-113		40
“ “		113-114		41
“ “		114-115		42
“ “		115-116		43
“ “		116-117		44
“ “		117-118		45
“ “		118-119		46
“ “		119		47
“ “		120		48
Butterworth v. Hill,	128		51	
“ “		129-130		57
“ “		130-131		58
“ “		131-132		59
“ “		132-133		60
“ “		133		61
Stephenson v. Brooklyn R. R. Co.,	149		63	
“ “		151		82
“ “		151-152		83
“ “		152-153		84
“ “		153-154		85
“ “		154-155		86
“ “		155-156		87
“ “		156-157		88
“ “		157		89
“ “		157-158		90
Western Electric Co. v. Ansonia Brass Co.,	447		94	
“ “		449		98
“ “		449-450		99
“ “		450-451		100
“ “		451-452		101
“ “		452		102
“ “		453		103
Beecher Mnfg. Co. v. Atwater Mnfg. Co.,	523		106	
“ “		523-524		116
“ “		524		117
Clark v. Beecher Mnfg. Co.,	115 U. S.		120	
“ “	79			
		79		121

REFERENCE TABLE OF COMPARATIVE PAGES. xix

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
	115 U. S.			
Clark v. Beecher Mnfg. Co.,		79-81		124
" "		(80) D		125 D
" "		(80) D		126 D
" "		(81) D		127 D
" "		(81) D		128 D
" "		(82) D		129 D
" "		(82) D		130 D
" "		(83) D		131 D
" "		(83) D		132 D
" "		81-83		133
" "		83-84		134
" "		(84) D		135 D
" "		(84) D		136 D
" "		(85) D		137 D
" "		(85) D		138 D
" "				139 D
" "				140 D
" "		85-86		141
" "		86-87		142
Wollensak v. Reiher,	87		145	
" "		87		147
" "		88-89		148
" "		(88) D		149 D
" "		(88) D		150 D
" "		89-91		151
" "		91-92		152
" "		(90) D		153 D
" "		(90) D		154 D
" "		(91) D		155 D
" "		(91) D		156 D
" "		92-93		157
" "		93-94		158
" "		94-95		159
" "		95-96		160
Wollensak v. Reiher,	96		162	
" "		96-97		166
" "		97-98		167
" "		98-99		168
" "		99-100		169
" "		100-101		170
" "		101-102		171
" "		102		172
Eachus v. Broomall,	429		176	
" "		429-430 S		178
" "		(431) D		179 D
" "		(431) D		180 D
" "		430-432 S		181
" "		432-433 S		182
" "		433 S		183
" "		433-435		184
" "		435-436		185

xx REFERENCE TABLE OF COMPARATIVE PAGES.

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Eachus v. Broomall,	115 U. S.	436		186
" "		436-437		187
" "		437-438		188
" "		438-439		189
Miller v. Foree,	116 U. S.			
" "	22	22	193	195
" "		22-23		196
" "		23-24		197
" "		24-25		198
" "		25-26		199
" "		26-27		200
" "		27-28		201
Field v. De Comeau,	187		204	
" "		187		205
" "		187-188		206
" "		(189) D		207 D
" "		(189) D		208 D
" "		188-190		209
" "		190		210
Brown v. Davis,	237		212	
" "		238-239		217
" "		239-241		218
" "		(240) D		219 D
" "		(240) D		220 D
" "		241-242		221
" "		242-243		222
" "		243-244		223
" "		244-245		224
" "		245-246		225
" "		246-247		226
" "		247-248		227
" "		248-249		228
" "		249-250		229
" "		250-251		230
" "		251-252		231
" "		252		232
Shepard v. Carrigan,	593		235	
" "		593-594		236 S
" "				237 D
" "				238 D
" "		594		239 S
" "		594-595		241
" "		595-596		242
" "		596-597		243
" "		597-598		244
" "		598		245
Preston v. Manard,	661		249	
" "		661 S		258
" "		661-662 S		259
" "		662-663 S		260
" "		663-664		261

REFERENCE TABLE OF COMPARATIVE PAGES. xxi

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Preston v. Manard,	116 U. S.			
		664		262
Yale Lock Mnfg. Co. v. Sargent,	117 U. S.			
"	373		264	
"		373-374		266
"		374-375		267
"		375-377		268
"		(376) D		269 D
"		(376) D		270 D
"		377-378		271
"		378		272
Yale Lock Mnfg. Co. v. Sargent,	536		275	
"		537-538		280
"		(540) D		281 D
"		(540) D		282 D
"		538-539		283
"		539-540		284
"		541		285
"		541-542		286
"		542-543		287
"		543-544		288
"		544-545		289
"		545-546		290
"		546-547		291
"		547-548		292
"		548-549		293
"		549		294
"		549-550		295
"		550-551		296
"		551-552		297
"		552-553		298
"		553-554		299
"		554		300
Yale Lock Mnfg. Co. v. Greenleaf,	554		303	
"		555		315
"		555-556		316
"		556-557		317
"		557-558		318
"		558-559		319
Cantrell v. Wallick,	689		322	
"		690		325
"		690-691		326
"		(692) D		327 D
"		(692) D		328 D
"		691-693		329
"		693-694		330
"		694		331
"		695		332
"		695-696		333
U. S. Rifle and Cartridge Co. v. Whit-	118 U. S.			
ney Arms Co.,	22		337	
"		23		341

xxii REFERENCE TABLE OF COMPARATIVE PAGES.

TITLE OF CASES.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
	118 U. S.			
U. S. Rifle and Cartridge Co. v. Whitney Arms Co.,		23-24		342
“ “ “		24-25		343
Keyes v. Grant,	25		346	
“ “		26		349
“ “		26-27		350
“ “				351 D
“ “				352 D
“ “		27-28		353
“ “		28-29		354
“ “				355 D
“ “				356 D
“ “		29-31		357
“ “		31-32		358
“ “				359 D
“ “				360 D
“ “		32-34		361
“ “		35-36		362
“ “				363 D
“ “				364 D
“ “		36-37		365
“ “		37		366
Gardner v. Herz,	180		368	
“ “		181-182		372
“ “		(182) D		373 D
“ “		(182) D		374 D
“ “		183		375
“ “		183-184		376
“ “		184-185		377
“ “		185-186		378
“ “		186-187		379
“ “		187-188		380
“ “		188-189		381
“ “		189-190		382
“ “		190-191		383
“ “		191-192		384
“ “		192		385
“ “		192-193		386
“ “		193		387
	119 U. S.			
Consolidated Safety-Valve Co. v. Kunkle.	45		391	
“ “ “		45-46		394
“ “ “		46		395
White v. Dunbar,	47		397	
“ “		47-48		401
“ “		48-49		402
“ “				403 D
“ “				404 D
“ “		49-50		405
“ “		50		406
“ “		50-51		407

REFERENCE TABLE OF COMPARATIVE PAGES. xxiii

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
	119 U. S.			
White v. Dunbar,		51-52		408
" "		52		409
Hapgood v. Hewitt,	226		412	
" "		227-228		415
" "		228-229		416
" "		229-230		417
" "		230-231		418
" "		231-232		419
" "		232-233		420
" "		233		421
" "		233-234		422
" "		234		423
Clark v. Wooster,	322		426	
" "		323-324		433
" "		324		434
" "		324-325		435
" "		325-326		436
" "		326		437
Clark Pomace Holder v. Ferguson,	335		441	
" "		335-336		443
" "		336-337		444
" "		(336) D		445 D
" "		(336) D		446 D
" "		337-338		447
" "		338		448
Newton v. Furst & Bradley Mnfg. Co.,	373		450	
" "		374		452
" "		374-375		453
" "		375-377		454
" "		(376) D		455 D
" "		(376) D		456 D
" "		(376) D		457 D
" "		(376) D		458 D
" "		377-378		459
" "		378-379		460
" "		379-380		461
" "		380-381		462
" "		381-382		463
" "		383		464
" "		383-384		465
" "		384-385		466
California Paving Co. v. Schalicke.	401		469	
" "		401-403		471
" "		403-404		472
" "		(402) D		473 D
" "		(402) D		474 D
" "		404-405		475
" "		405		476
" "		406		477
" "		406-407		478
Sutter v. Robinson.	530		481	
" "		531		484

xxiv REFERENCE TABLE OF COMPARATIVE PAGES.

TITLE OF CASE,	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Sutter v. Robinson,	119 U. S.	531-532		485
" "		532-534		486
" "		(533) D		487 D
" "		(533) D		488 D
" "		534-535		489
" "		535		490
" "		535-536		491
" "		536-537		492
" "		537-538		493
" "		538-539		494
" "		539-540		495
" "		540-541		496
" "		541-542		497
" "		542		498
Sharp v. Riessner.	631		501	
" "		631-633		503
" "		633-634		504
" "		(632) D		505 D
" "		(633) D		506 D
" "		634-635		507
" "		635-636		508
" "		636-637		509
Ives v. Sargent.	652		512	
" "		652		514
" "		652-653		515
" "		654-655		516
" "		655-656		517
" "		656-657		518
" "		(655) D		519 D
" "		(655) D		520 D
" "		657-658		521
" "		658-659		522
" "		659-660		523
" "		660-661		524
" "		661-662		525
" "		662-663		526
" "		663		527
Hartshorn v. Saginaw Barrel Co.	664		530	
" "		664		538
" "		665		539
" "		665-666		540
" "		666-668		541
" "		668-669		542
" "		669-670		543
" "		670-671		544
" "		671-672		545
" "		672-673		546
" "		673-674		547
" "		674-675		548
" "		675		549
" "		675-676		550

REFERENCE TABLE OF COMPARATIVE PAGES. xxv

TITLE OF CASE.	OFFICIAL REPORT.		IN THIS VOLUME.	
	Case begins.	Opinion begins.	Case begins.	Opinion begins.
Hartshorn v. Saginaw Barrel Co.,	119 U. S.	(677-678) D		551 D
" "		(677-678) D		552 D
" "		676-677		553
" "		677-679		554
" "		679		555
Grier v. Wilt.	120 U. S.		558	
" "	412	413		561
" "		413-417		562
" "		(414) D		563 D
" "		(414) D		564 D
" "		(415) D		565 D
" "		(415) D		566 D
" "		(416-417) D		567 D
" "		(416-417) D		568 D
" "		417-418		569
" "		418-419		570
" "		419-420		571
" "		420-421		572
" "		(422) D		573 D
" "		(422) D		574 D
" "		(423) D		575 D
" "		(423) D		576 D
" "		421-424		577
" "		424-425		578
" "		425-426		579
" "		426-427		580
" "		427-428		581
" "		428-429		582
" "		429		583
" "		429-430		584

TABLE OF PATENTS IN SUIT
IN CASES REPORTED IN THIS VOLUME.

Number of Patent.	Patentee.	Date of Patent.	Subject of Invention.	Inserted in this Volume.	Title of Case in this Volume.	Page.
No. 140,536	Pope, F. L.	July 1, 1873.	Electric Railroad Signal	Drg.	Electric R. R. Signal Co. v. Hall Ry. Signal Co.	1
No. 21,659	Douglass, A.	Oct. 5, 1858. Dec. 10, 1872.	Sewing-Machine. Reissue No. 5,180.		Thomson v. Wooster.	28
No. 142,810	O'Haire, J. A.	Sept. 16, 1873.	Street-Car.	Spec. & drg.	Butterworth v. Hill. Stephenson v. Brooklyn R. R. Co.	51
No. 161,568	Stephenson, J.	Mch. 30, 1875.	Signaling Drivers on Street Cars.		Stephenson v. Brooklyn R. R. Co.	63
No. 167,585	Stephenson, J.	Sept. 7, 1875.	Street-Cars.		Stephenson v. Brooklyn R. R. Co.	
No. 129,858	Olmstead, J.	July 13, 1872.	Insulating Telegraph Wires		Western Electric Co. v. Ansonia Brass Co.	94
		Feb. 29, 1876.	Reissues Nos. 6,954 and 6,955		Western Electric Co. v. Ansonia Brass Co.	
No. 100,053	Miller, R. R.	Feb. 22, 1870.	Dies.	Spec. & drg.	Beecher Mfg. Co. v. Atwater Mfg. Co.	106
	-	May 6, 1879.	Reissue No. 8,694.		Beecher Mfg. Co. v. Atwater Mfg. Co.	
No. 66,130	Clark, J. B.	June 25, 1867.	Blanks for Carriage-Thills	Drg.	Clark v. Beecher Mfg. Co.	120
No. 136,801	Wollensak, J. F.	Mch. 11, 1873.	Transom Lifter.	Drg.	Wollensak v. Reiher.	145
		July 20, 1880.	Reissue No. 9,307.		"	
No. 148,538	Wollensak, J. F.	Mch. 10, 1874.	Transom Lifter.		"	162
		Dec. 26, 1882.	Reissue No. 10,264.		"	
No. 142,154	Eachus, J.	Aug. 26, 1873.	Machine for Cutting Paper Boards.	Drg.	Eachus v. Broomall.	176
		Mch. 2, 1875.	Reissue No. 6,315.		"	

TABLE OF PATENTS IN SUIT—CONTINUED.

Number of Patent.	Patentee.	Date of Patent.	Subject of Invention.	Inserted in this Volume.	Title of Case in this Volume.	Page.
No. 185,119	Miller & Worley.	Dec. 5, 1876.	Finishing Plug Tobacco.		Miller v. Foree.	193
No. 155,077	Field, J. F.	Jan. 29, 1878.	Reissue No. 8,060.	Drp.	Field v. De Comeau.	204
No. 74,515	Davis, C. F.	Sept. 15, 1874.	Glove-Fastening.	Drp.	Brown v. Davis.	212
		Feb. 18, 1868.	Grain Drill.		"	
No. 155,534	Macdonald, H. M.	Feb. 18, 1879.	Reissue No. 8,589.	Drp.	Shepard v. Carrigan.	235
No. 183,188	McGaffey, I. W.	Sept. 29, 1874.	Dress-Protector.	Spec. & drg.	Preston v. Manard.	249
		Oct. 10, 1876.	Fountain-Hose Carriage.		"	
		Feb. 28, 1882.	Reissue No. 10,047.			
No. 98,622	Sargent, J.	Jan. 4, 1870.	Permutation Lock.	Drp.	Yale Lock Mnfg. Co. v. Sargent.	264
No. 57,574	Sargent, J.	Aug. 28, 1866.	Lock.	Drp.	Yale Lock Mnfg. Co. v. Sargent.	275
No. 30,092	Rosner, G.	Jan. 2, 1872.	Reissue No. 4,696.	Spec. & drg.	Yale Lock Mnfg. Co. v. Greenleaf.	303
		Sept. 18, 1860.	Permutation Lock.		Yale Lock Mnfg. Co. v. Greenleaf.	
		July 25, 1871.	Reissue No. 4,488.		Cantrell v. Wallick.	322
No. 163,825	Wallick, W.	May 25, 1875.	Apparatus for Enameling Moldings.	Drp.	U.S. Rifle and Cartridge Co. v. Whitney Arms Co.	337
No. 126,446	Cochran, J. W.	May 7, 1872.	Breech-Loading Fire-Arm.		Keyes v. Grant.	346
No. 121,385	Keyes & Arents.	Nov. 28, 1871.	Smelting-Furnace.	Drp.	Gardner v. Herz.	368
No. 127,045	Gardner, G.	May 21, 1872.	Chair-Seat.	Drp.	"	
		July 4, 1876.	Reissue No. 7,203.		"	
		Feb. 24, 1880.	Reissue No. 9,094.		"	
No. 58,294	Richardson, G. W.	Sept. 25, 1866.	Safety-Valve.		Consolidated Safety-Valve Co. v. Kunkle.	391
No. 85,963	Richardson, G. W.	Jan. 19, 1869.	Safety-Valve.		Consolidated Safety-Valve Co. v. Kunkle.	

TABLE OF PATENTS IN SUIT—CONTINUED.

Number of Patent.	Patentee.	Date of Patent.	Subject of Invention.	Inserted in this Volume.	Title of Case in this Volume.	Page.
No. 178,916	Dunbar, G. W.	June 20, 1876. Dec. 6, 1881.	Preserving Shrimp. Reissue No. 9,957.	Drg.	White v. Dunbar.	397
No. 210,670	Hewitt, H. L.	Mch. 26, 1878.	Sulky-Plow.		Hapgood v. Hewitt.	412
No. 21,659	Douglass, A.	Oct. 5, 1858.	Sewing-Machine.		Clark v. Wooster.	426
No. 187,100	Clark, J.	Dec. 10, 1872. Feb. 6, 1877.	Reissue No. 5,180. Cheese Former for Cider Press.	Drg.	Clark Pomace-Holder Co. v. Ferguson.	441
No. 58,612	Davenport, F. S.	Oct. 9, 1866.	Gang-Plow.	Drg.	Newton v. Furst and Bradley Mnfg. Co.	450
No. 105,599	Schillinger, J. J.	Dec. 2, 1879.	Reissue No. 8,986.		Newton v. Furst and Bradley Mnfg. Co.	
No. 216,293	Robinson, A.	July 19, 1870. May 2, 1871. June 10, 1879.	Concrete Pavement. Reissue No. 4,364. Tobacco Re-sweating Apparatus.	Drg.	California Artificial Paving Co. v. Schalicke.	469
No. 177,334	Hutchins, A. B.	May 16, 1876.	Hydrocarbon Stove.	Drg.	Sutter v. Robinson.	481
No. 202,158	Davis, F.	Apr. 9, 1878. Oct. 18, 1881.	Door Bolt. Reissue No. 9,901.	Drg.	Sharp v. Riessner.	501
No. 69,176	Campbell, W. M.	Sept. 24, 1867.	Curtain Fixture.	Spec. & drg.	Ives v. Sargent.	512
No. 68,502	Hartshorn, S.	Oct. 31, 1876. Sept. 3, 1867. Oct. 31, 1876.	Reissue No. 7,367. Curtain-Fixture. Reissue No. 7,370.		Hartshorn v. Saginaw Barrel Co.	530
No. 69,189	David, J.	Sept. 24, 1867.	Curtain-Fixture.		"	"
No. 190,368	Reynolds, A. Q.	May 1, 1877.	Fruit Drier.	Drg.	"	"
					Grier v. Wilt.	558

TABLE OF CITATIONS

IN THE CASES REPORTED IN THIS VOLUME.

NOTE.—Cases cited in the Statement marked S.

" " " Argument " A.
 " " " Opinion " Opin.
 " " " Dissenting opinion marked Dis. opin.

Citation.	Where reported.	Page, cited in this vol.
Adams v. Bridgewater Iron Co.	26 Fed. Rep. 325	432. A.
Adams v. Howard	19 Fed. Rep. 317	432. A.
Adams v. Joliet Mnfg. Co.	12 O. G. 93.	279, 315. A.
Adams v. Jones	1 Fish. 527	341, 513. A.
Aiken v. Dolan	3 Fish. 204	442. A.
Albright v. Celluloid Harness Tr. Co.	12 Off. Gaz. 227	371. A.
American Bell Tel. Co. v. Dolbear	15 Fed. Rep. 454	240. A.
American Bell Tel. Co. v. Spencer	8 Fed. Rep. 516	240. A.
American Cotton-Tie Co. v. Simmons	106 U. S. 89 [14 Am. & Eng. 159]	435. Opin.
American Cotton-Tie Co. v. Simmons	106 U. S. 89 [14 Am. & Eng. 159]	432. A.
American Whip Co. v. Lombard	4 Cliff. 505	451. A.
American Window Screen Co. v. Boughton	10 Phila. 262	324. A.
Ames v. Howard	1 Sumn. 482	484. A.
Arnheim v. Finster	26 Fed. Rep. 280	514. A.
Arthur v. Jacoby	103 U. S. 677	348. A.
Asmus v. Alden	27 Fed. Rep. 684	442, 513. A.
Atkinson v. Boardman	Law's Dig. 666	53. A.
Atlantic Works v. Brady	107 U. S. 192 [14 Am. & Eng. 380]	88, 186, 319, 447. Opin.

TABLE OF CITATIONS.

Citation.	Where reported.	Page, cited in this vol.
Atwater Mnfg. Co. v. Beecher Mnfg. Co.	8 Fed. Rep. 608	116. Opin.
Badger v. Badger	2 Wall. 87	172. Opin.
Bailey v. Taylor	1 R. & M. 73	428. A.
Ball v. Langles	102 U. S. 128 [12 Am. & Eng. 508]	216. A.
Bank v. Ins. Co.	103 U. S. 783	348. A.
Bantz v. Frantz	105 U. S. 160 [13 Am. & Eng. 542]	31. A.
Barb. Ch. Pr.	Vol. 1, p. 479	47. Opin.
Barber v. Barber	21 How. 592	413. A.
Barry v. Barry	1 J. & W. 653	429. A.
Bates v. Coe	98 U. S. 42 [12 Am. & Eng. 150]	146, 257. A.
Battin v. Taggart	17 How. 74 [6 Am. & Eng. 243]	215, 513. A.
Beaubien v. Beaubien	23 How. 190	172. Opin.
Bedford v. Hunt	1 Mas. 302	442. A.
Belt v. Crittenden	2 Fed. Rep. 82	371. A.
Betts v. Menzies	10 H. of L. Cases, 117	80. A.
Bevin v. East Hampton Bell Co.	9 Blatch. 50	338, 340. A.
Signall v. Harvey	5 Ban. & Ard. 636	215. A.
Birdsall v. McDonald	1 Ban. & Ard. 165	513. A.
Bischoff v. Wethered	9 Wall. 812 [8 Am. & Eng. 213]	347, 349. A.
Black v. Munson	14 Blatch. 265	32. A.
Black v. Thorne	111 U. S. 122 [15 Am. & Eng. 201]	32. A.
Blake v. Robertson	11 Blatch. 237	451. A.
Blake v. San Francisco	113 U. S. 679 [15 Am. & Eng. 535]	86. Opin.
Blanchard v. Putnam	3 Fish. 186	147. A.
Blanchard v. Sprague	3 Sumn. 535	484. A.
Boland v. Thompson	26 Fed. Rep. 634	514. A.
Boston & Maine Railroad v. Bartlett	10 Gray, 384	431. A.
Brace v. Taylor	2 Atk. 253	429. A.
Brainard v. Cramme	12 Fed. Rep. 623	400. A.
Bridge Co. v. Excelsior Co.	105 U. S. 618 [14 Am. & Eng. 112]	5. A.
Brooks v. Byam	2 Story, 525	413. A.
Brooks v. Fiske	15 How. 212 [6 Am. & Eng. 15]	452. A.
Brown v. Davis	116 U. S. 237 [p. 212, <i>post.</i>]	452. A.
Brown v. Piper	91 U. S. 37 [10 Am. & Eng. 272]	184, 186, 583. Opin.

TABLE OF CITATIONS.

xxxi

Citation.	Where reported.	Page, cited in this vol.
Brown v. Piper.	91 U. S. 37 [10 Am. & Eng. 272]	31, 97, 398. A.
Brummit v. Howard	3 Fed. Rep. 801	371. A.
Brundage v. Goodfellow . .	4 Halst. Ch. 513	47. Opin.
Bunker & Briesdorf v. Butter- worth	(unreported)	54. A.
Burdell v. Denig	92 U. S. 716 [10 Am. & Eng. 420]	32. A.
Burden v. Corning	2 Fish. 487	147, 560. A.
Burr v. Duryee	1 Wall. 573 [7 Am. & Eng. 224]	214, 398, 399. A.
Bussey v. Excelsior Mnfg. Co.	110 U. S. 131 [15 Am. & Eng. 77]	447. Opin.
Butler v. Shaw	21 Fed. Rep. 321	54, 55. A.
California Artificial S. P. Co. v. Freeborn	8 Sawy. 443	476. Opin.
California Artificial S. P. Co. v. Molitor	7 Sawy. 190	476. Opin.
Carlton v. Bokee	17 Wall. 463 [9 Am. & Eng. 91]	399. A.
Carr v. Rice	1 Fish. 198	80. A.
Carter v. Baker.	4 Fish. 404	280. A.
Cartridge Co. v. Cartridge Co.	112 U. S. 354 [15 Am. & Eng. 364]	244. Opin.
Cartridge Co. v. Whitney Arms Co.	14 Blatch. 94	342. Opin.
Carver v. Hyde	16 Pet. 515 [4 Am. & Eng. 367]	265. A.
Case v. Brown	2 Wall. 320 [7 Am. & Eng. 360]	265. A.
Cawood Patent	94 U. S. 710 [11 Am. & Eng. 235]	46. Opin.
" "	94 U. S. 695 [11 Am. & Eng. 235]	80. A.
Celluloid Mnfg. Co. v. Amer- ican Zylonite Co.	36 O. G. 1043	442. A.
Chandler v. Van Roeder . .	24 How. 226	347. A.
Charter v. Trevelyan . . .	11 Cl. & F. 714	513. A.
Clark v. Beecher Mnfg. Co. .	7 Fed. Rep. 816	124. Opin.
Clark v. Copeland	2 Fish. 227	214. A.
Clark Pomace Holder Co. v. Ferguson	21 Blatch. 376	446. Opin.
Clements v. Odorless Exca- vating Apparatus Co. . .	109 U. S. 641 [15 Am. & Eng. 44]	400, 452. A.

Citation.	Where reported.	Page, cited in this vol.
Clough v. Barker	106 U. S. 166 [14 Am. & Eng. 211]	240. A.
Clowes v. Beck	13 Beav. 347	428. A.
Coffin v. Ogden	18 Wall. 120 [9 Am. & Eng. 125]	333. Opin.
“ “	18 Wall. 124 [9 Am. & Eng. 125]	195, 215, 442.
Colden v. Knickerbocker	2 Cow. 31	32. A.
Colgate v. W. U. Tel. Co.	15 Blatch. 365	81. A.
Collar Co. v. Van Deusen	23 Wall. 563 [10 Am. & Eng. 156]	97. A.
Combined Patents Can Co. v. Lloyd	21 O. G. 713	399, 537. A.
Consolidated Fruit-Jar Co. v. Wright	94 U. S. 92 [11 Am. & Eng. 46]	339, 341. A.
Consolidated Safety Valve Co. v. Crosby Steam-Gage & Valve Co.	113 U. S. 157 [15 Am. & Eng. 460]	394, 435. Opin.
Consolidated Valve Co. v. Crosby Valve Co.	113 U. S. 157 [15 Am. & Eng. 460]	432, 442. A.
Consolidated Safety-Valve Co. v. Kunkle	14 Fed. Rep. 732	394. Opin.
Continental Windmill Co. v. Empire Windmill Co.	8 Blatch. 295	421. Opin.
Continental Windmill Co. v. Empire Windmill Co.	8 Blatch. 295	413. A.
Cook v. Ernst	5 Fish. 406	165. A.
Coon v. Wilson	113 U. S. 268 [15 Am. & Eng. 504]	527. Opin.
“ “	113 U. S. 268 [15 Am. & Eng. 504]	400. A.
Corning v. Burden	15 How. 252 [6 Am. & Eng. 69]	484. A.
Corn-Planter Patent	23 Wall. 181 [10 Am. & Eng. 1]	97, 194, 339. A.
County of Macon v. Shores	97 U. S. 272	348. A.
Crandall v. Richardson	8 Fed. Rep. 808	372. A.
Crandal v. Watters	20 Blatch. 97	513. A.
Crompton v. Knowles	7 Fed. Rep. 204	241. A.
Curtis on Patents	§§ 225, 227	401. A.
“ “	§ 311	146. A.
“ “	§ 402	280. A.
“ “	4th ed. 213	413. A.

TABLE OF CITATIONS.

xxxiii

Citation.	Where reported.	Page, cited in this vol.
Damon v. Eastwick	22 O. G. 1709	54. A.
Dan. Ch. Pr.	1st ed., vol. 1, p. 696	39. Opin.
“ “	1st ed., vol. 2, p. 804	47. Opin.
“ “	2d ed., vol. 2, by Perkins, p. 1358	47. Opin.
Dane v. Illinois Mnfg. Co.	3 Biss. 74	279. A.
Davis v. Brown	19 Blatch. 263	226. Opin.
Davis v. Davis	2 Atk. 21	38. Opin.
Davis v. Palmer	2 Brock. 310	442. A.
Davoll v. Brown	1 Wood. & M. 53	484. A.
Dick v. Struthers	25 Fed. Rep. 103	432. A.
Doherty v. Allman	3 App. Cas. H. of L. 709	428. A.
Doran v. Carroll	11 Ir. Ch. 283	429. A.
Doubleday v. Roess	11 Fed. Rep. 737	370. A.
Double-Pointed Tack Co. v. Two Rivers Mnfg. Co.	109 U. S. 117 [14 Am. & Eng. 571]	447. Opin.
Double-Pointed Tack Co. v. Two Rivers Mnfg. Co.	3 Fed. Rep. 26	370, 371. A.
Downton v. Yaeger Milling Co.	118 U. S. 466 [14 Am. & Eng. 513]	80. A.
Duff v. Sterling Pump Co.	107 U. S. 639 [14 Am. & Eng. 440]	240. A.
Dunbar v. Albert Field Tack Co.	4 Fed. Rep. 543	371. A.
Dunbar v. Meyers	94 U. S. 187 [11 Am. & Eng. 59]	19. Opin.
Duvall v. Waters	1 Bland (Md.) 577	428. A.
Fay v. Cordesman	109 U. S. 408 [15 Am. & Eng. 1]	20, 229, 244. Opin.
“ “	109 U. S. 408 [15 Am. & Eng. 1]	5, 265. A.
Fitch v. Bragg	16 Fed. Rep. 243	280. A.
Flood v. Hicks	2 Bissell. 169	262. Opin.
Flower v. Rayner	5 Fed. Rep. 793	31. A.
Foote v. Silsby	2 Blatch. 270	214. A.
Forbush v. Cook	2 Fish. 668	81, 115. A.
Forum Romanum	36	38. Opin.
Fricke v. Hum	22 Fed. Rep. 304	98. A.
Fuller v. Yentzer	94 U. S. 288 [11 Am. & Eng. 138]	19. Opin.
“ “	93 U. S. 288 [11 Am. & Eng. 138]	214. A.
Eachus v. Broomall	115 U. S. 429 [p. 176 <i>post</i>]	583. Opin.
“ “	115 U. S. 429 [p. 176 <i>post</i>]	400. A.

Citation.	Where reported.	Page, cited in this vol.
Eames v. Cook	2 Fish. 146	324. A.
Eames v. Godfrey	1 Wall. 78 [7 Am. & Eng. 158]	19. Opin.
" "	1 Wall. 78 [7 Am. & Eng. 158]	451. A.
Egbert v. Lippmann	104 U. S. 333 [13 Am. & Eng. 273]	443. A.
Ellithorpe v. Robertson	2 Fish. 83	53, 54. A.
Eppinger v. Richey	14 Blatch. 307	442. A.
Equity Cas. Abr.	vol. 2, p. 179	38. Opin.
Equity Rules VI and X of 1822	7 Wheat. VII	48. Opin.
Estey v. Burdett	109 U. S. 633 [15 Am. & Eng. 32]	447. Opin.
Fletcher v. Bealey	28 Ch. Div. 688	428. A.
Fuller v. Yentzer	94 U. S. 288 [11 Am. & Eng. 138]	451, 452, 559. A.
Gage v. Herring	107 U. S. 640 [14 Am. & Eng. 454]	20, 229, 272, 299. Opin.
" "	107 U. S. 640 [14 Am. & Eng. 454]	5, 194, 216, 278, 400, 451. A.
Gallahue v. Butterfield	10 Blatch. 232	115, 513. A.
Gardner v. Herz	118 U. S. 180 [p. 368 <i>post</i>].	448. Opin.
" "	20 Blatch. 538	381. Opin.
Gayler v. Wilder	10 How. 477 [5 Am. & Eng. 188]	195. A.
Geary v. Sheridan	8 Ves. 192	41. Opin.
Gen. Ord.	ch. XIV, 3-7	47. Opin.
Giant Co. v. Safety Co.	19 Fed. Rep. 509	32. A.
Giant Powder Co. v. Cal. Powder Works	98 U. S. 126 [12 Am. & Eng. 201]	398. A.
Giant Powder Co. v. Cal. Vig- orit Powder Works	6 Sawy. 508	31, 399, 538. A.
Gill v. Wells	22 Wall. 1 [9 Am. & Eng. 471]	20. Opin.
" "	22 Wall. 1 [9 Am. & Eng. 471]	559. A.
Glue Co. v. Upton	97 U. S. 3 [11 Am. & Eng. 458]	97, 399. A.
Godden v. Kimmell	99 U. S. 201	172. Opin.
Goff v. Oberteuffer	3 Phil. 71	413. A.
Gold & Stock Co. v. Wiley	19 Fed. Rep. 234	32. A.
Goodyear v. Cong. Rubber Co.	3 Blatch. 449	413. A.
Goodyear v. Providence R. Co.	2 Fish. 499	399. A.

TABLE OF CITATIONS

XXXV

Citation.	Where reported.	Page, cited in this vol.
Goodyear D. V. Co. v. Davis	102 U. S. 222 [12 Am. & Eng. 524]	244. Opin.
"	" 102 U. S. 222 [12 Am. & Eng. 524]	4. A.
Gordon v. Anthony	16 Blatch. 234	280. A.
Gottfried v. Moerlein	14 Fed. Rep. 170	432. A.
Gould v. Rees	15 Wall. 194 [9 Am. & Eng. 39]	20. Opin.
"	" 15 Wall. 187 [9 Am. & Eng. 39]	5, 451. A.
Gower v. Andrew	59 Cal. 119	413. A.
Graham v. McCormick	11 Fed. Rep. 859	513. A.
Grand Chute v. Winegar	15 Wall. 373	423. Opin.
Grant v. Raymond	6 Pet. 218 [4 Am. & Eng. 245]	484. A.
Greely, <i>Ex parte</i>	6 Fish. 575	53. A.
Greenleaf v. Birth	9 Pet. 299	347. A.
Griffiths v. Holmes	8 Fed. Rep. 154	371. A.
Griggs v. Houston	104 U. S. 553	348. A.
Grumley v. Webb	44 Mo. 444	413. A.
Guidet v. Brooklyn	105 U. S. 550 [14 Am. & Eng. 38]	262. Opin.
"	" 105 U. S. 550 [14 Am. & Eng. 38]	257. A.
Hailes v. Van Wormer	20 Wall. 353 [9 Am. & Eng. 340]	90, 117, 331. Opin.
"	" 20 Wall. 353 [9 Am. & Eng. 340]	114, 194, 370, 443, 452, 502, 538. A.
Hall v. MacNeale	107 U. S. 90 [14 Am. & Eng. 291]	186, 447. Opin.
Hapgood v. Hewitt	11 Biss. 184	415, 421. Opin.
Hart v. Strong	15 Vt. 377	32. A.
Hartford v. Chipman	21 Conn. 488	413. A.
Hartshorn v. Eagle Shade Roller Co.	18 Fed. Rep. 90	546, 548. Opin.
Hartshorn v. Eagle Co.	18 Fed. Rep. 90	32. A.
Hawes v. Antisdell	2 Ban. & Ard. 10	215. A.
Hawkins v. Crook	2 P. Wms. 556	37, 38. Opin.
Hawley v. Clowes	2 John, Ch. 122	428. A.
Haworth v. Hardcastle	1 Web. Pat. Cas. 485	484. A.
Hayes v. Seton	12 Fed. Rep. 120	370. A.
Hayward v. Andrews	106 U. S. 672 [14 Am. & Eng. 276]	427. A.
Heald v. Rice	104 U. S. 754 [13 Am. & Eng. 460]	186. Opin.

Citation.	Where reported.	Page, cited in this vol.
Heald v. Rice	104 U. S. 737 [13 Am. & Eng. 460]	177, 178, 348, 349. A.
Henry v. Cuyler	17 Johns. 469	32. A.
Herbert v. Butler	97 U. S. 319	348. A.
Herring v. Nelson	3 Ban. & Ard. 55	115, 513. A.
Heyn v. Heyn	Jacob, 49	47. Opin.
Hickman v. Jones	9 Wall. 201	347. A.
Hicks v. Kelsey	18 Wall. 670 [9 Am. & Eng. 150]	370. A.
High on Injunctions	vol. 1, §§ 89-93	423. Opin.
Hill v. Biddle	27 Fed. Rep. 560	442. A.
Hodgson v. Duce	2 Jur. N. S. 1014	428. A.
Hoe v. Cottrell	5 Ban. & Ard. 256	115. A.
Hoff. Ch. Pr.	vol 1, p. 520	47. Opin.
Hollister v. Benedict Mnfg. Co.	113 U. S. 59 [15 Am. & Eng. 417]	447. Opin.
Hollister v. Benedict & Burnham Mnfg. Co.	113 U. S. 59 [15 Am. & Eng. 417]	257, 442. A.
Hood v. Boston Car Spring Co.	21 Fed. Rep. 67	80. A.
Hotchkiss v. Greenwood	11 How. 248 [5 Am. & Eng. 240]	88. Opin.
" "	11 How. 248 [5 Am. & Eng. 240]	369. A.
Howes v. McNeal	3 Ban. & Ard. 376	513. A.
Hoyt v. Sprague	103 U. S. 613	514. A.
Imhaeuser v. Buerk	101 U. S. 647 [12 Am. & Eng. 443]	20. Opin.
Ingersoll v. Turner	12 Off. Gaz. 189	371. A.
Insurance Co. v. Doster	106 U. S. 30	348. A.
Isaacs v. Abrams	14 O. G. 861	80. A.
Ives v. Sargent	21 Blatch. 417	523. Opin.
James v. Campbell	104 U. S. 356 [13 Am. & Eng. 341]	408. Opin.
" "	104 U. S. 356 [13 Am. & Eng. 341]	31, 177, 178, 399, 537. A.
Jenkins v. Greenwald	2 Fish. 38	429, 431. A.
Jesus College v. Bloom	3 Atk. 262	428. A.
Johnson v. Root	1 Fish. 363	324. A.
Jones v. Barker	11 Fed. Rep. 597	432, 559. A.
Kane v. Wittick	8 Wend. 219	32. A.
Kay v. Marshall	7 Scott, 548	262. Opin.
" "	5 Bing. N. C. 492	262. Opin.
Kelleher v. Darling	4 Cliff. 424	195. A.

TABLE OF CITATIONS.

xxxvii

Citation.	Where reported.	Page, cited in this vol.
Keller, <i>Proced. Rom.</i>	‡ 69	37. Opin.
Kendall v. United States	12 Pet. 525	53. A.
Kendall v. Winsor	21 How. 322 [7 Am. & Eng. 1]	340. A.
Kerosene Lamp Heater Co. v. Little	3 Ban. & Ard. 312	371. A.
Kerr on Injunctions	Am. Ed., 1871, pp. 235, 287, 332	428. A.
" "	Am. Ed., pp. 353, 363	429. A.
Keystone Bridge Co. v. Phœ- nix Iron Co.	95 U. S. 274 [11 Am. & Eng. 364]	319, 408. Opin.
Keystone Bridge Co. v. Phœ- nix Iron Co.	95 U. S. 278 [11 Am. & Eng. 364]	214. A.
King v. Gallun	109 U. S. 99 [14 Am. & Eng. 559]	88, 447. Opin.
King v. Louisville Cement Co. . . .	6 Fish. 336	451. A.
King v. Wheeler	2 B. & Ald. 345	262. Opin.
Kuhl v. Mueller	21 Fed. Rep. 510	477. Opin.
" "	21 Fed. Rep. 510	470. A.
Lake Shore & M. S. R. Co. v. Car-Brake Shoe Co.	110 U. S. 229 [15 Am. & Eng. 124]	435. Opin.
Lake Shore, &c., R. R. v. Car- Brake Shoe Co.	110 U. S. 229 [15 Am. & Eng. 124]	432. A.
Lambert v. Lambert	2 Ir. Eq. 210	429. A.
Lane v. Peck	13 Fed. Rep. 475	280. A.
Lansdale v. Smith	106 U. S. 391	172. Opin.
Lathrop v. Marsh	5 Ves. 259	428. A.
Leggett v. Avery	101 U. S. 256 [12 Am. & Eng. 369]	244, 245. Opin.
" "	101 U. S. 256 [12 Am. & Eng. 369]	258. A.
Lehigh Valley R. R. Co. v. Mellon	104 U. S. 112 [13 Am. & Eng. 200]	324. A.
Lehnbeuter v. Holthaus	105 U. S. 94	333. Opin.
Le Roy v. Tatham	14 How. 181 [5 Am. & Eng. 313]	484. A.
" "	22 How. 139 [7 Am. & Eng. 29]	80. A.
Livingston v. Livingston	6 John. Ch. 497	428. A.
Locomotive Co. v. Penn. R. Co.	110 U. S. 490 [15 Am. & Eng. 148]	277. A.

Citation.	Where reported.	Page, cited in this vol.
Loom Co. v. Higgins . . .	105 U. S. 580 [14 Am. & Eng. 70] . . .	331. Opin.
“ “ . . .	105 U. S. 580 [14 Am. & Eng. 70] . . .	240. A.
Losh v. Hague . . .	1 Web. Pat. Cas. 197 [2 Am. & Eng. 477] . . .	431. A.
McMillan v. St. Louis Co. .	18 Fed. Rep. 261 . . .	432. A.
McAllister v. Kuhn . . .	96 U. S. 87 . . .	31. A.
McClung v. Silliman . . .	6 Wheat. 598 . . .	53. A.
McClurg v. Kingsland . . .	1 How. 202 [4 Am. & Eng. 382] . . .	421. Opin.
“ “ . . .	1 How. 202 [4 Am. & Eng. 382] . . .	413, 414. A.
McComb v. Brodie . . .	1 Woods, 153 . . .	298. Opin.
“ “ . . .	5 Fish. 384 . . .	280. A.
McCormick v. Talcott . . .	20 How. 402 [6 Am. & Eng. 410] . . .	19. Opin.
“ “ . . .	20 How. 402 [6 Am. & Eng. 410] . . .	147, 215, 240, 452. A.
McLean v. Fleming . . .	96 U. S. 257 . . .	165. A.
McMurray v. Mallory . . .	111 U. S. 97 [15 Am. & Eng. 171] . . .	20. Opin.
“ “ . . .	111 U. S. 97 [15 Am. & Eng. 171] . . .	5, 400. A.
McNish v. Everson . . .	2 Fed. Rep. 900 . . .	195. A.
Mabie v. Haskell . . .	2 Cliff. 510 . . .	442. A.
Machine Co. v. Murphy . .	97 U. S. 120 [11 Am. & Eng. 494] . . .	332. Opin.
Macnamara v. Hulse . . .	Car. & M. 471 . . .	262. Opin.
Mahn v. Harwood . . .	112 U. S. 354 [15 Am. & Eng. 322] . . .	170, 244, 384, 525. Opin.
“ “ . . .	112 U. S. 354 [15 Am. & Eng. 322] . . .	164, 165, 166, 194, 216, 371, 399, 400, 452. A.
Manning v. Glue Co. . . .	23 O. G. 2413 [14 Am. & Eng. 504] . . .	443. A.
Manufacturing Co. v. Corbin	103 U. S. 786 [13 Am. & Eng. 147] . . .	178. A.
Manufacturing Co. v. Cowing	105 U. S. 253 [14 Am. & Eng. 1] . . .	32. A.
“ “ . . .	12 Blatch. 243 . . .	32. A.
“ “ . . .	14 Blatch. 315 . . .	32. A.
Manufacturing Co. v. Ladd	102 U. S. 408 [13 Am. & Eng. 1] . . .	400. A.

TABLE OF CITATIONS.

xxxix

Citation.	Where reported.	Page, cited in this vol.
Manufacturing Co. v. Stamp- ing Co.	111 U. S. 319 [15 Am. & Eng. 238]	31. A.
Marsh v. Sayles	5 Fish. 610	338. A.
Marsh v. Whitmore	21 Wall. 178	172. Opin.
Maxwell v. Kennedy	8 How. 210	431. A.
Mevs v. Conover	11 O. G. 1111 [11 Am. & Eng. 39]	32. A.
Miller v. Brass Co.	104 U. S. 350 [13 Am. & Eng. 303]	167, 169, 408, 547. Opin.
" "	104 U. S. 350 [13 Am. & Eng. 303]	31, 164, 195, 399, 400, 452, 537. A.
Moffitt v. Rogers	106 U. S. 423 [14 Am. & Eng. 244]	178, 400. A.
Mont Clair v. Dana	107 U. S. 162	348. A.
Moore v. Greene	19 How. 69	172. Opin.
Morris v. McMillin	112 U. S. 244 [15 Am. & Eng. 310]	447. Opin.
" "	112 U. S. 244 [15 Am. & Eng. 310]	257. A.
Morton v. N. Y. Eye Infirm- ary	2 Fish. 320	97. A.
Mowry v. Whitney	14 Wall. 620 [9 Am. & Eng. 1]	32. A.
Murphy v. Ins. Co.	25 Wend. 249	32. A.
Murray v. Clayton	L. R. 7 Ch. 570	147. A.
National Bank v. Carpenter	101 U. S. 567	431. A.
Neilson v. Harford	Web. Pat. Cas. 341 [3 Am. & Eng. 231]	484. A.
Neilson v. Thompson	1 Web. Pat. Cas. 286 [3 Am. & Eng. 151]	429. A.
Newton v. Furst & Bradley Co.	11 Biss. 405	463. Opin.
New York Belting Co. v. Ma- gowan	27 Fed. Rep. 111	432. A.
New York Belting & Packing Co. v. Magowan	27 Fed. Rep. 362	442. A.
Nixon's Dig. Art. Chancery	§ 21	47. Opin.
Ogilvie v. Hearne	13 Ves. 563	39. Opin.
O'Hara v. McConnell	93 U. S. 150	48. Opin.
Oliver v. Rumford Chem. Works	109 U. S. 75 [14 Am. & Eng. 532]	422. Opin.

TABLE OF CITATIONS.

Citation.	Where reported.	Page, cited in this vol.
Oliver v. Rumford Chem. Works	109 U. S. 75 [14 Am. & Eng. 532]	414. A.
O'Reilly v. Morse	15 How. 62 [5 Am. & Eng. 483]	394. A.
Orleans v. Platt	99 U. S. 676	348. A.
Pacific R. R. Co. v. Ketchum	101 U. S. 289	31. A.
Packing Co. Cases	105 U. S. 566 [14 Am. & Eng. 49]	443. A.
" " "	13 Fed. Rep. 304	370. A.
Parham v. American Button- hole, &c., Co.	4 Fish. 468	513. A.
Parker v. Cotton & Woolen Co.	2 Black. 545	428, 429. A.
Parker v. Haworth	4 McLean, 372	484. A.
Parker v. Stiles	5 McLean, 62	80, 324. A.
Pearl v. Ocean Mills	2 Ban. & Ard. 420	513. A.
Pence v. Langdon	99 U. S. 578	348. A.
Pendleton v. Evans	4 Wash. C. C. 338	48. Opin.
Perfection Window-Cleaner Co. v. Bosley	2 Fed. Rep. 574	370. A.
Pennsylvania R. R. Co. v. Locomotive Truck Co.	110 U. S. 490 [15 Am. & Eng. 148]	86, 101, 186, 201, 387, 447. Opin.
Pennsylvania Salt Co. v. Gu- genheim	3 Fish. 423	240. A.
Perry v. Co-op. Foundry Co.	12 Fed. Rep. 436	370. A.
Phillips v. Detroit	111 U. S. 604 [15 Am. & Eng. 269]	88, 319, 447. Opin.
" "	111 U. S. 604 [15 Am. & Eng. 269]	98, 257, 278. A.
Philp v. Nock	17 Wall. 460 [8 Am. & Eng. 470]	298. Opin.
Pickering v. McCullough	104 U. S. 310 [13 Am. & Eng. 238]	90, 117. Opin.
" "	21 Off. Gaz. 75 [13 Am. & Eng. 238]	370, 443. A.
Pitts v. Hall	2 Blatch. 229	280, 340. A.
Pitts v. Wemple	1 Biss. 87	559. A.
Pitts v. Whitman	2 Story, 619	80. A.
Planing Machine Co. v. Keith	101 U. S. 479 [12 Am. & Eng. 404]	343. Opin.
Planing Machine Co. v. Keith	101 U. S. 484 [12 Am. & Eng. 404]	339, 340, 341. A.

TABLE OF CITATIONS.

xli

Citation.	Where reported.	Page, cited in this vol.
Potter v. Crowell	2 Fish. 112	431. A.
Potter v. Stewart	18 Blatch. 565	240. A.
Powder Co. v. Parker	16 Blatch. 281	80. A.
Powder Co. v. Powder Works	98 U. S. 126 [12 Am. & Eng. 201]	183. Opin.
" " " "	98 U. S. 126 [12 Am. & Eng. 201]	177, 178, 215, 216, 349, 399, 537. A.
Prentiss v. Ellsworth	27 O. G. 623	53. A.
Proctor v. Brill	4 Fed. Rep. 415	278. A.
Prouty v. Ruggles	16 Pet. 336 [4 Am. & Eng. 351]	19. Opin.
" "	16 Pet. 336 [4 Am. & Eng. 351]	5, 452. A.
Railroad Co. v. Dubois	12 Wall. 47 [8 Am. & Eng. 443]	583. Opin.
Railroad Co. v. Ketchum	101 U. S. 289	32. A.
Railroad Co. v. Mellon	104 U. S. 112 [13 Am. & Eng. 200]	103, 319. Opin.
" "	104 U. S. 118 [13 Am. & Eng. 200]	502, 538. A.
Railroad Co. v. Turrill	94 U. S. 709 [11 Am & Eng. 235]	32. A.
Railway Co. v. Sayles	97 U. S. 554 [12 Am. & Eng. 121]	215, 240, 258, 399, 452. A.
Randall v. Baltimore & Ohio		
R. R. Co.	109 U. S. 478	362. Opin.
Reay v. Raynor	19 Fed. Rep. 308	432. A.
Reckendorfer v. Faber	92 U. S. 347 [10 Am. & Eng. 373]	90. Opin.
" "	92 U. S. 347 [10 Am. & Eng. 373]	98, 114, 370, 443, 502 538. A.
Reed v. Chase	25 Fed. Rep. 94	215, 451. A.
Reeves v. Keystone Co.	5 Fish. 456	80. A.
Rice v. Heald	13 Pac. L. R. 34	80. A.
Rich v. Close	4 Fish. 279	538. A.
Rich v. Lippincott	2 Fish. 1	339. A.
Roberts v. Dickey	4 Fish. 532.	80. A.
Roberts v. Ryer	91 U. S. 157 [10 Am. & Eng. 302]	186. Opin.
Robinson v. Sutter	10 Biss. 100	491. Opin.
" "	11 Fed. Rep. 798	491, 493. Opin.
Rogers v. Sargent	7 Blatch. 507	215. A.
Root v. Lamb	7 Fed. Rep. 222	559. A.

Citation.	Where reported.	Page, cited in this vol.
Root v. Railway Co.	105 U. S. 189 [13 Am. & Eng. 556]	435. Opin.
" "	105 U. S. 189 [13 Am. & Eng. 556]	427, 428, 429. A.
Rose v. Woodruff	4 Johns. Ch. 547	41. Opin.
Rubber Coated Harness-Trim- ming Co. v. Welling	97 U. S. 10 [11 Am. & Eng. 479]	98. A.
Rubber Tip Pencil Co. v. Howard	20 Wall. 498 [9 Am. & Eng. 390]	114, 371, 398. A.
Rumford Chem. Works v. Hecker	2 Ban. & Ard. 386	429. A.
Rumford Chem. Works v. Vice	14 Blatch. 179	432. A.
Runstettler v. Ackinson & Marble	23 O. G. 940	53. A.
Russell v. Cowley	Web. Pat. Cas. 470 [2 Am. & Eng. 76]	484. A.
Russell v. Dodge	93 U. S. 460 [10 Am. & Eng. 495]	216, 399. A.
Safety-Valve Co. v. Crosby Steam Gage & Valve Co.	113 U. S. 157 [15 Am. & Eng. 460]	391. A.
Sands v. Hildreth	12 Johns. 493	32. A.
Sargent v. Hall Safe & Lock Co.	114 U. S. 63 [15 Am. & Eng. 573]	229, 244, 245. Opin.
Sargent v. Hall Safe & Lock Co.	114 U. S. 63 [15 Am. & Eng. 573]	258, 265, 277. A.
Sargent v. Yale Lock Mnfg. Co.	17 Blatch. 244	293. Opin.
Sarven v. Hall	9 Blatch. 524	399. A.
Sawyer v. Bixby	9 Blatch. 361	370. A.
Sawyer v. Miller	12 Fed. Rep. 727	370. A.
Saxby v. Gloucester Waggon Co.	7 Q. B. Div. 305	386. Opin.
Sayles v. Chicago & N. W. R. R. Co.	2 Fish. 523	513. A.
Sayles v. Dubuque Co.	5 Dill. 562	432. A.
Schillinger v. Greenway Brew- ing Co.	21 Blatch. 383	477. Opin.
Schillinger v. Gunther	14 Blatch. 152	475. Opin.
" "	15 Blatch. 303	32. A.
" "	17 Blatch. 66	476. Opin.

TABLE OF CITATIONS.

xliii

Citation.	Where reported.	Page, cited in this vol.
Schmidt v. Freese	12 Fed. Rep. 563	559. A.
Searls v. Bonton	12 Fed. Rep. 626	31. A.
" "	12 Fed. Rep. 874	399. A.
Seymour v. Osborne	11 Wall. 516 [8 Am. & Eng. 290]	20, 331. Opin.
" "	11 Wall. 516 [8 Am. & Eng. 290]	5, 79, 80, 147, 194, 215, 216, 349, 398, 401, 433, 451. A.
" "	3 Fish. Pat. Cas. 555.	560. A.
Shaw v. Cooper	7 Pet. 292 [4 Am. & Eng. 286]	340. A.
Shepard v. Carrigan	116 U. S. 593 [p. 235 post]	497. Opin.
Sheriff v. Fulton	22 O. G. 87	399. A.
Siebert Oil Cup Co. v. Harper Steam Lubricator Co.	4 Fed. Rep. 328	537. A.
Silsby v. Foote	14 How. 217 [5 Am. & Eng. 411]	19. Opin.
" "	20 How. 378 [6 Am. & Eng. 388]	300. Opin.
Singer v. Walmsley	1 Fish. 558	147, 452. A.
Slacum v. Pomery	6 Cranch. 221	31. A.
Slawson v. Grand Street Rail- road Co.	107 U. S. 649 [14 Am. & Eng. 475]	88, 319, 447. Opin.
Slawson v. R. R. Co.	107 U. S. 649 [14 Am. & Eng. 475]	31, 257. A.
Slawson v. Grand St. P. P. & F. R. R. Co.	4 Fed. Rep. 531	371. A.
Smith's Ch. Pract.	Vol. 1, 153	39. Opin.
Smith v. Cook	3 Atk. 381	428. A.
Smith v. Downing	1 Fish. Pat. Cas 64	559. A.
Smith v. Goodyear Dental Vulcanite Co.	93 U. S. 486 [11 Am. & Eng. 1]	333. Opin.
Smith v. Goodyear D. V. Co.	93 U. S. 486 [11 Am. & Eng. 1]	216, 369, 442. A.
Smith v. Merriam	6 Fed. Rep. 713	513, 537. A.
Smith v. Nichols	21 Wall. 112 [9 Am. & Eng. 425]	85. Opin.
" "	21 Wall. 112 [9 Am. & Eng. 425]	98, 257, 278. A.
Smith v. O'Connor	6 Fish. 469	280. A.
Spaeth v. Barney	30 O. G. 997	165. A.
Squires, John J.	12 O. G. 1025	54. A.
Stanhope's Case	L. R. 1 Ch. App. Cas. 161, 513.	A.

TABLE OF CITATIONS.

Citation.	Where reported.	Page, cited in this vol.
Star Salt Caster Co. v. Cross-		
man	4 Cliff. 568	331. Opin.
Stearns v. Page	7 How. 819	172. Opin.
Stephenson v. Brooklyn R.		
R. Co.	114 U. S. 149 [p. 63 <i>post</i>]	117, 447. Opin.
Stephenson v. Brooklyn R.		
R. Co.	114 U. S. 149 [p. 63, <i>post</i>]	278. A.
Stimpson v. Baltimore & S.		
R. R. Co.	10 How. 329 [5 Am. & Eng. 129]	559. A.
Stimpson v. Woodman	10 Wall. 117 [8 Am. & Eng. 221]	88, 184, 186. Opin.
Storrs v. Howe	4 Cliff. 388	559. A.
Story, Eq. Jur.	Vol. 1, pp. 669, 703	413. A.
Story, Eq. Pl.	§ 23	429, 430. A.
Stover v. Halstead	13 Blatch. 95	315. A.
Strobridge v. Lindsay	2 Fed. Rep. 692	80. A.
Stutz v. Armstrong	20 Fed. Rep. 843	513. A.
Sugar Refinery Co. v. Mat-		
thiessen	2 Fish. 600	194. A.
Tatam v. Williams	3 Hare, 347	431. A.
Taylor v. Garretson	9 Blatch. 156	451. A.
Terhune v. Phillips	99 U. S. 593 [12 Am. & Eng. 270]	398. A.
Thatcher Heating Co. v. Bur-		
tis	12 Fed. Rep. 569	370. A.
Thompson v. Boisselier	114 U. S. 1 [15 Am. & Eng. 549]	384, 447. Opin.
“ “	114 U. S. 1 [15 Am. & Eng. 549]	257, 277. A.
Thomson v. Wooster	114 U. S. 104 [p. 28, <i>post</i>]	433, 435, 436. Opin.
“ “	114 U. S. 104 [p. 28, <i>post</i>]	432. A.
Thwort v. Thwort	16 Ves. 128	428. A.
Tilghman v. Proctor	102 U. S. 707 [13 Am. & Eng. 29]	177, 240. A.
Tobey Furniture Co. v. Colby	34 O. G. 1276	560. A.
Toledo Mower & Reaper Co.		
v. Johnson Harvester Co.	23 Blatch. 132	432. A.
Torrent & Arms Lumber Co.		
v. Rodgers	112 U. S. 659 [15 Am. & Eng. 396]	400. A.
Troy Iron & Nail Factory v.		
Corning	14 How. 193 [5 Am. & Eng. 375]	422. Opin.
Troy Iron & Nail Factory v.		
Corning	14 How. 193 [5 Am. & Eng. 375]	414. A.

TABLE OF CITATIONS.

xiv

Citation.	Where reported.	Page, cited in this vol.
Tucker v. Spaulding	13 Wall. 453 [8 Am. & Eng. 474]	186. Opin.
" "	13 Wall. 453 [8 Am. & Eng. 474]	80, 347. A.
Turner & Seymour Mnfg. Co. v. Dover Stamping Co. . . .	111 U. S. 319 [15 Am. & Eng. 238]	400, 452. A.
Union Paper Collar Co. v. Crane	6 O. G. 801	53. A.
United Nickel Co. v. Pendle- ton	15 Fed. Rep. 739	240. A.
United States v. Tillotson . .	12 Wheat. 181	347. A.
United States & Foreign Sala- mander Felting Co. v. Ha- ven	2 Ban. & Ard. 164	399. A.
Valve Co. v. Valve Co. . . .	113 U. S. 157 [15 Am. & Eng. 460]	240. A.
Vance v. Campbell	1 Black, 427 [7 Am. & Eng. 117]	19, 184, 583. Opin.
" "	1 Black, 427 [7 Am. & Eng. 117]	5. A.
Vinton v. Hamilton	104 U. S. 485 [13 Am. & Eng. 394]	86, 101, 447. Opin.
Walker v. Jeffreys	1 Hare, 348	431. A.
Walker on Patents	p. 134	55. A.
" "	§ 55	165. A.
" "	§ 76	325. A.
" "	§§ 221-224	31. A.
" "	§ 597	165. A.
Wallace v. Noyes	13 Fed. Rep. 172	370. A.
Washburn v. Gould	2 Story, 122	333. Opin.
Washburn & Moen Mnfg. Co. v. Haish	4 Fed. Rep. 900	240, 442. A.
Washburn & Moen Mnfg. Co. v. Haish	10 Biss. 65	559. A.
Washing-Machine Co. v. Tool Co.	20 Wall. 342 [9 Am. & Eng. 305]	559. A.
Water-Meter Co. v. Desper . .	101 U. S. 332 [12 Am. & Eng. 380]	229, 272. Opin.
" "	101 U. S. 332 [12 Am. & Eng. 380]	5, 451, 502, 538. A.
Watson v. Hunter	5 John. Ch. 169	428. A.
Webster v. New Brunswick Carpet Co.	5 O. G. 522	559. A.
Weir v. Morden	29 Off. Gaz. 83	339. A.

TABLE OF CITATIONS.

Citation.	Where reported.	Page, cited in this vol.
Welling v. Rubber Harness- Trimming Co.	7 O. G. 606	559. A.
Westcott v. Rude	19 Fed. Rep. 830	278. A.
Wharton's Digest	vol. 2, p. 365	53. A.
Wheeler v. Clipper Mower and Reaper Co.	10 Blatch. 181	371. A.
Whipple v. Miner	23 O. G. 2236	53, 54. A.
Whiteley v. Swayne	7 Wall. 685 [8 Am. & Eng. 70]	398. A.
" "	4 Fish. 123	31, 398. A.
Whiting v. Graves	3 Ban. & Ard. 222	421. Opin.
" "	13 Pat. Off. Gaz. 455	413, 414. A.
Wicke v. Ostrum	103 U. S. 461 [13 Am. & Eng. 114]	5, 393. A.
Wicks v. Stevens	2 Ban. & Ard. 318	31. A.
Wilkins v. Spafford	3 Ban. & Ard. 274	422. Opin.
" "	13 Pat. Off. Gaz. 675	413. A.
Williams v. Corwin	Hopkins Ch. Rep. 471	38. Opin.
Williams v. R. R. Co.	15 O. G. 653	115. A.
Williams v. Rome, W. & O. R. R. Co.	15 Blatch. 200	370. A.
Wilson v. Coon	18 Blatch. 536	32, 215, 537. A.
Wilson v. Rousseau	4 How. 646 [4 Am. & Eng. 436]	163, 164. A.
Wilson v. Stolly	5 McLean, 1	413. A.
Wilson Packing Co. v. Chi- cago Pack. & Prov. Co.	105 U. S. 566 [14 Am. & Eng. 49]	370. A.
Wilt v. Grier	5 Fed. Rep. 450	579. Opin.
Winans v. Denmead	15 How. 341 [6 Am. & Eng. 107]	442. A.
Wing v. Anthony	106 U. S. 142 [14 Am. & Eng. 188]	177, 178, 400. A.
Wollensak v. Reiher	115 U. S. 96 [p. 162 <i>post</i>]	524. Opin.
" "	115 U. S. 96 [p. 162 <i>post</i>]	452. A.
Wood v. Carpenter	101 U. S. 135	172. Opin.
Wood v. McIntyre	7 Cranch, 504	53. A.
Wood v. Mill Co.	4 Fisher, 560	215. A.
Woodworth v. Wilson	4 How. 712 [4 Am. & Eng. 542]	431. A.
Wooster v. Simonson	16 Fed. Rep. 680	278. A.
Yale Lock Mfg. Co. v. Green- leaf	117 U. S. 554 [p. 303 <i>post</i>]	385, 448. Opin.
Yale Lock Mfg. Co. v. Sco- ville Mfg. Co.	3 Fed. Rep. 288	537. A.

TABLE OF ABBREVIATIONS

OF THE TITLE OF REPORTS AND WORKS OF LAW USED IN THIS
VOLUME.

Abb. Pat. Laws	Abbott's Patent Laws of all Nations.
Abb. U. S.	Abbott, U. S. Circuit Court.
Abb. U. S. Prac.	Abbott's U. S. Practice Cases.
Ad. & Ell. (N. S.)	Adolphus & Ellis, England, K. B.
Alb. L. J.	Albany Law Journal.
Am. Law Jour.	American Law Journal.
Am. Law Reg. (N. S.)	American Law Register (New Series.)
Am. & Eng.	American & English Patent Cases.
App. Cas.	Appeal Cases, English Law Reports.
Atk.	Atkyn Chancery Reports, England.
Att'y Gen.	Attorney General's Decisions.
B. & A.	Banning & Arden's Patent Cases, U. S.
B. & Ad.	Barnewall & Adolphus, England, K. B.
B. & Ald.	Barnewall & Alderson, England, K. B.
B. & C.	Barnewall & Cresswell, England, K. B.
Bald.	Baldwin, U. S. Circuit Court.
Ban. & Ard.	Banning & Arden's Patent Cases, U. S.
Barb.	Barbour's New York Chancery Reports.
Barb. Ch. Pr.	Barbour's Chancery Practice.
Best & S.	Best & Smith, England, Q. B.
Bing. (N. C.)	Bingham's New Cases, England, C. P.
Biss.	Bissell, U. S. Circuit Court.
Black	Black, U. S. Supreme Court.
Blatch.	Blatchford, U. S. Circuit Court.
B. Mon.	Ben. Monroe's Kentucky Reports.
Bond	Bond, U. S. Circuit Court.
Bradw.	Bradwell's Illinois Reports.
Brews.	Brewster's Pennsylvania Reports.
Bright. Fed. Dig.	Brightly's Federal Digest.
Brock.	Brockenbrough, U. S. Circuit Court.
Brodix	Brodix's American & English Patent Cases.
Bump.	Bump on the Law of Patents.
C. B. (N. S.)	Common Bench Reports, New Series.
C. D.	Commissioner of Patents' Decisions, U. S.
C. P.	Common Pleas, England.

C. & F.	Clark & Finnelly's House of Lords Reports, England.
Car. & Kir.	Carrington & Kirwan, England, N. P.
Car & M.	Carrington & Marshman's English Nisi Prius Reports.
Ch. Div.	Chancery Division, English Law Reports.
Cliff.	Clifford, U. S. Circuit Court.
Com. Bench	Common Bench Reports, England.
Com. Dec.	Commissioner of Patents' Decisions, U. S.
Cond. (Reps.)	Peters' Condensed Reports, U. S. Supreme Court.
Co. v.	Cowen's New York Reports.
Cranch	Cranch, U. S. Supreme Court.
Ct. of Claims	Court of Claims, U. S.
Curt.	Curtis, U. S. Circuit Court.
Curtis on Pats.	Curtis on Patents, U. S.
Cush.	Cushing's Massachusetts Reports.
D. & R.	Dowling & Rylands, England.
Dall.	Dallas, U. S. Circuit Court.
Dan. Ch. Pr.	Daniell's Chancery Practice.
Dav.	Davies' Patent Cases, England.
De G. M. & G.	De Gex, Macnaghten & Gordon, England, Chancery.
Denio	Denio's New York Reports.
Dill.	Dillon, U. S. Circuit Court.
E. C. L. R.	English Common Law Reports.
East	East, England, K. B.
Ell. & Bl.	Ellis & Blackburn, England, Q. B.
Eng. C. L. (C. B. N. S.)	English Common Law Reports.
Eng. L. & E.	English Law & Equity Reports.
Exch. W. H. & G.	Exchequer Reports (Welsby, Hurlstone, & Gordon,) England.
Fed. Rep.	Federal Reporter, U. S.
Fish.	Fisher's Patent Cases, U. S.
Fish. Pat. Rep.	Fisher's Patent Reports, U. S.
Flipp.	Flippin, U. S. Circuit Court.
Gall.	Gallison, U. S. Circuit Court.
Gen. Ord. Ch.	General Order of the High Court of Chancery.
Gill	Gill's Maryland Reports.
Godson on Pats.	Godson on Patents, England.
Gratt.	Gratton's Virginia Reports.
Gray	Gray's Massachusetts Reports.
Greenl. Ev.	Greenleaf on Evidence.
H. Bl.	Henry Blackstone, England, C. P.
H. of L.	House of Lords' Cases.
H. & N.	Hurlstone & Norman, England, Exch.
Halst Ch.	Halstead's New Jersey Reports.

TABLE OF ABBREVIATIONS.

xlix

Hare	Hare's Vice-Chancellor's Reports, England.
Har. & Gill	Harris & Gill's Maryland Reports.
Hemp.	Hempstead, U. S. Circuit Court.
High Ex. Rem.	High on Extraordinary Legal Remedies.
Hill	Hill's New York Reports.
Hind. Pat.	Hindmarch on Patents, England.
Hoff. Ch. Pr.	Hoffman's Chancery Practice.
Holmes	Holmes, U. S. Circuit Court.
Hopkins	Hopkins' New York Reports.
How.	Howard, U. S. Supreme Court.
Hughes	Hughes, U. S. Circuit Court.
Hurls. & Colt.	Hurlstone & Coltman, England, Exch.
Hurls. & Nor.	Hurlstone & Norman, England, Exch.
Ir. Ch.	Irish Chancery Reports.
Ill.	Illinois Reports.
J. & W.	Jacob & Walker, Chancery Reports, England.
J. B. Moore	J. B. Moore, England, C. P.
Jacob	Jacob's Chancery Reports, England.
Johns.	Johnson's New York Reports.
Jur. N. S.	The Jurist, New Series, London.
Kerr Inj.	Kerr on Injunctions.
L. ed.	Lawyer's Edition of Supreme Court Reports.
L. J. (N. S.) C. P.	Law Journal, New Series, Common Pleas.
L. J. (N. S.) Q. B.	The Law Journal, New Series, London, Queen's Bench.
L. R. C. P.	English Law Reports, Common Pleas.
L. R. Ch. App.	English Law Reports, Chancery Appeals.
L. R. Eq.	English Law Reports, Equity.
L. Times (N. S.)	Law Times, New Series.
Law's Dig.	Law's Digest, London.
Law T. (N. S.)	Law Times Reports, New Series.
Leg. Int.	Legal Intelligencer.
M. & Cr.	Mylne & Craig, England, Ch.
M. & W.	Meeson & Welsby, England, Exch.
MacA.	MacArthur's District of Columbia Reports.
MacA. & McK.	MacArthur & Mackey.
McAll.	McAllister, U. S. Circuit Court.
McC.	McCrary, U. S. Circuit Court.
McL.	McLean, U. S. Circuit Court.
Mackey	Mackey, U. S. Circuit Court.
Man. G. & Scott	Manning, Granger & Scott, England, C. P.
Marsh.	Marshall, England, C. P.
Mas.	Mason, U. S. Circuit Court.
Mass.	Massachusetts Reports.
Mees. & W.	Meeson & Welsby, England, Exch.
Merwin on Pat. Invt.	Merwin on Patentability of Inventions.
Met.	Metcalf's Massachusetts Reports.

TABLE OF ABBREVIATIONS.

Mod.	Modern Reports, England, K. B.
Moore & S.	Moore & Scott, England, C. P.
Ma. D. C.	Manuscript Cases, District of Columbia.
Munf.	Munford's Virginia Reports.
N. Y.	New York Court of Appeals Reports.
New Eng. R.	New England Reporter.
O. G.	Official Gazette of Patent Office, U. S.
Off. Gaz.	Official Gazette of Patent Office, U. S.
Otto	Otto, U. S. Supreme Court.
P. Wm.	Peere Williams' Reports, England.
Pa.	Pennsylvania Reports.
Pac. L. R.	Pacific Law Reporter.
Paige Ch. R.	Paige's New York Chancery Reports.
Paine	Paine, U. S. Circuit Court.
Pet.	Peters, U. S. Supreme Court.
Pet. C. C.	Peters, U. S. Circuit Court.
Phila.	Philadelphia Reports.
Pick.	Pickering's Massachusetts Reports.
Pitts. R.	Pittsburgh Reports.
Pott. Dwarris	Potter's Ed. of Dwarris on Statutes.
Q. B.	Queen's Bench Reports.
Q. B. Div.	Queen's Bench Division, Law Reports, Eng- land.
R. & M.	Russell & Mylne, England, Ch.
Rep.	The Reporter, U. S.
Robb	Robb's Patent Cases.
Salk.	Salkeld, England, K. B.
Sandf.	Sandford's New York Superior Court.
Sawy.	Sawyer, U. S. Circuit Court.
Scam.	Scammon's Illinois Reports.
Scott (N. R.)	Scott's New Reports, England, C. P.
Seld.	Selden's Reports (5-10 N. Y. Court of Appeals.)
Sm. Lead. Cas.	Smith's Leading Cases.
Smith Ch. Pract.	Smith's Chancery Practice.
Story	Story, U. S. Circuit Court.
Sumn.	Sumner, U. S. Circuit Court.
Sup. Ct. Rep. N. Y.	Supreme Court Reports, New York.
T. R.	Term Reports, (Durnford & East,) England.
Taney	Taney, U. S. Circuit Court.
Taunt.	Taunton, England, C. P.
Term R.	Term Reports, (Durnford & East,) England.
U. S.	United States Supreme Court Reports.
U. S. Law Jour.	United States Law Journal.
Ves.	Vesey, England, Ch.
Vern.	Vernon, England, Ch.
Vt.	Vermont Reports.
W. & M.	Woodbury & Minot, U. S. Circuit Court.

TABLE OF ABBREVIATIONS.

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W. Va. Rep.	West Virginia Reporter.
Walker on Pata.	Walker on Patents.
Wall.	Wallace, U. S. Supreme Court.
Wall., Jr.	Wallace, Jr., U. S. Circuit Court.
Wash.	Washington, U. S. Circuit Court.
Watts & S.	Watts & Sergeant's Pennsylvania Reports.
Web. P. C.	Webster's Patent Cases, England.
Web. on Sub. Mat. of Pats.	Webster on Subject Matter of Patents.
Wend.	Wendell's New York Reports.
West, H. L.	West's House of Lords Reports, England.
Whart. Dig.	Wharton's Pennsylvania Digest.
Wheat.	Wheaton, U. S. Supreme Court.
Whit.	Whitman's Patent Cases, U. S.
Wood. & M.	Woodbury & Minot, U. S. Circuit Court.
Woods	Woods, U. S. Circuit Court.

NAMES OF JUSTICES

WHOSE DECISIONS ARE REPORTED IN THIS VOLUME.

Mr. Justice Blatchford.	Clark v. Beecher Mnfg. Co., p. 123.
_____	Brown v. Davis, p. 217.
_____	Yale Lock Mnfg. Co. v. Sargent, p. 282.
_____	Gardner v. Herz, p. 374.
_____	Safety Valve Co. v. Kunkle, p. 394.
_____	Hapgood v. Hewitt, p. 415.
_____	Pomace Holder Co. v. Ferguson, p. 443.
_____	California Paving Co. v. Schalicke, p. 471.
_____	Newton v. Furst & Bradley Co., p. 452.
Mr. Justice Bradley.	Thomson v. Wooster, p. 32.
_____	Miller v. Foree, p. 195.
_____	White v. Dunbar, p. 401.
_____	Clark v. Wooster, p. 433.
Mr. Justice Gray.	Beecher Mnfg. Co. v. Atwater Mnfg. Co., p. 116.
_____	Preston v. Manard, p. 258.
_____	Cartridge Co. v. Whitney Arms Co., p. 341.
Mr. Justice Matthews.	Signal Co. v. Signal Co., p. 8.
_____	Wollensak v. Reiher, p. 147.
_____	Wollensak v. Reiher, p. 166.
_____	Eachus v. Broomall, p. 180.
_____	Field v. De Comeau, p. 205.
_____	Yale Lock Mnfg. Co. v. Sargent, p. 266.
_____	Keyes v. Grant, p. 349.
Mr. Chief Justice Waite.	Butterworth v. Hill, p. 57.
Mr. Justice Woods.	Stephenson v. Brooklyn R. R. Co., p. 82.
_____	Electric Co. v. Ansonia Brass Co., p. 98.
_____	Shepard v. Carrigan, p. 241.
_____	Yale Lock Mnfg. Co. v. Greenleaf, p. 315.
_____	Cantrell v. Wallick, p. 325.

NAMES OF COUNSEL

APPEARING IN CASES REPORTED IN THIS VOLUME.

-
- Mr. F. W. Baker, for Appellants. *White v. Dunbar*, p. 398.
 Mr. Simeon E. Baldwin, for Appellee. *Signal Co. v. Signal Co.*, p. 4.
 Mr. Ephraim Banning, for Appellant. *Wollensak v. Reiher*, p. 145.
 ————— for Appellant. *Wollensak v. Reiher*, p. 163
 Mr. Thomas A. Banning, for Appellant. *Wollensak v. Reiher*, p. 14 .
 ————— for Appellant. *Wollensak v. Reiher*, p. 163.
 Mr. Geo. P. Barton, for Appellant. *Electric Co. v. Ansonia Brass Co.*, p. 97.
 Mr. James A. Beattie, for Appellants. *Miller v. Foree*, p. 194.
 Mr. Sardius D. Bently, for Appellees. *Brown v. Davis*, p. 215.
 Mr. Frederic H. Betts, for Appellee. *Thomson v. Wooster*, p. 32.
 ————— for Appellant. *Yale Lock Mnfg. Co. v. Sargent*, p. 264.
 ————— for Appellant. *Yale Lock Mnfg. Co. v. Sargent*, p. 276.
 ————— for Appellant. *Yale Lock Mnfg. Co. v. Greenleaf*, p.
 313.
 ————— for Appellants. *Cartridge Co. v. Whitney Arms Co.*, p.
 338.
 ————— for Appellee. *Clark v. Wooster*, p. 431.
 Mr. L. L. Bond, for Appellant. *Wollensak v. Reiher*, p. 145.
 ————— for Appellant. *Wollensak v. Reiher*, p. 163.
 ————— for Appellees. *Newton v. Furst & Bradley Co.*, p. 451.
 Mr. Edward Boyd, for Appellee. *Hapgood v. Hewitt*, p. 414.
 Mr. C. M. Brazee, for Appellees. *Preston v. Manard*, p. 257.
 Mr. Chas. T. Brown, for Appellee. *Wollensak v. Reiher*, p. 146.
 ————— for Appellee. *Wollensak v. Reiher*, p. 165.
 Mr. F. I. Brown, for Appellant. *Butterworth v. Hill*, p. 52.
 Mr. F. L. Brown, for Appellants. *Brown v. Davis*, p. 213.
 Mr. B. F. Butler, for Appellee. *Shepard v. Carrigan*, p. 240.
 Mr. William Allen Butler, for Appellant. *Stephenson v. Brooklyn R. R. Co.*
 • p. 79.
 Mr. F. Chamberlin, for Appellants. *Signal Co. v. Signal Co.*, p. 3.
 Mr. Francis T. Chambers, for Appellants. *Miller v. Foree*, p. 194.
 ————— for Plaintiff. *Keyes v. Grant*, p. 347.
 Mr. George Christy, for Appellants. *Signal Co. v. Signal Co.*, p. 3.
 Mr. Joseph B. Church, for Appellees. *White v. Dunbar*, p. 399.
 Mr. Melville Church, for Appellees. *White v. Dunbar*, p. 399.
 Mr. Thomas Wm. Clarke, for Appellant. *Safety Valve Co. v. Kunkle*, p. 391.

- Mr. J. C. Clayton, for Appellants. Thomson v. Wooster, p. 30.
- Mr. L. L. Coburn, for Appellant. Newton v. Furst & Bradley Co. p. 451.
- Mr. William F. Cogswell, for Appellees. Brown v. Davis, p. 215.
- Mr. Newton Crane, for Appellees. Hapgood v. Hewitt, p. 413.
- Mr. George Ticknor Curtis, for Appellee. Yale Lock Mfg. Co. v. Sargent, p. 265.
- for Appellee. Yale Lock Mfg. Co. v. Sargent, p. 278.
- for Appellee. Yale Lock Mfg. Co. v. Greenleaf. p. 314.
- Mr. Edward N. Dickerson, for Appellant. Shepard v. Carrigan, p. 239.
- for Appellants. Gardner v. Herz, p. 369.
- Mr. Eugene N. Elliot, for Appellant. Field v. De Comeau, p. 204.
- Mr. Manuel Eyre, for Appellee. California Paving Co. v. Schalicke, p. 470.
- Mr. Joseph C. Farley, for Appellant. Eachus v. Broomall, 177.
- Mr. J. F. Farnsworth, for Appellees. Preston v. Manard, p. 257.
- Mr. H. T. Fenton, for Appellant. Beecher Mfg. Co. v. Atwater Mfg. Co., p. 114.
- Mr. F. P. Fish, for Appellee. Shepard v. Carrigan, p. 240.
- for Appellants. Clark v. Wooster, p. 427.
- Mr. James P. Foster, for Appellees. Gardner v. Herz, p. 370.
- Mr. George Gifford, for Appellant. Stephenson v. Brooklyn R. R. Co., p. 79.
- Mr. Whit. M. Grant, for Defendants. Keyes v. Grant, p. 348.
- Mr. George Harding, for Appellants. Miller v. Foree, p. 194.
- for Plaintiff. Keyes v. Grant, p. 347.
- Mr. Kittredge Haskins, for Appellees. Butterworth v. Hill, p. 54.
- Mr. Wm. G. Henderson, for Appellants. White v. Dunbar, p. 398.
- Mr. Joseph P. Hornor, for Appellants. White v. Dunbar, p. 398.
- Mr. Charles Howson, for Appellee. Cantrell v. Wallick, p. 325.
- Mr. J. E. Hindon Hyde, for Appellants. Cartridge Co. v. Whitney Arms Co., p. 338.
- Mr. Chas. R. Ingersoll, for Appellees. Beecher Mfg. Co. v. Atwater Mfg. Co. p. 115.
- Messrs. Joyce & Spear, for Appellants. White v. Dunbar, p. 398.
- Mr. A. Q. Keasbey, for Appellants. Thomson v. Wooster, p. 30.
- Mr. Walter H. King, for Appellee. Clark Pomace Holder Co. v. Ferguson, p. 442.
- Mr. T. L. Livermore, for Appellants. Clark v. Wooster, p. 427.
- Mr. Wm. A. McKenney, for Appellee. Wollensak v. Reiher, p. 146.
- for Appellee. Wollensak v. Reiher, p. 163.
- Mr. B. T. McNeal, for Defendants. Keyes v. Grant, p. 348.
- Mr. Thomas Macon, for Defendants. Keyes v. Grant, p. 348.
- Mr. Wayne MacVeagh, for Appellant. Eachus v. Broomall, p. 177.
- Mr. John W. Munday, for Appellants. Preston v. Manard, p. 256.
- Mr. Philip J. O'Reilly, for Appellant. Stephenson v. Brooklyn R. R. Co., p. 79.
- Mr. E. W. Pattison, for Appellants. Hapgood v. Hewitt, p. 413.
- Mr. Charles E. Perkins, for Appellants. Signal Co. v. Signal Co., p. 3.

NAMES OF COUNSEL.

lv

Mr. S. F. Phillips, for Appellant. *Butterworth v. Hill*, p. 52.

Mr. O. H. Platt, for Appellee. *Electric Co. v. Ansonia Brass Co.*, p. 97.

————— for Appellees. *Clark v. Beecher Mnfg. Co.*, p. 122.

————— for Appellant. *Beecher Mnfg. Co. v. Atwater Mnfg. Co.*, p. 114.

Mr. George S. Prindle, for Appellees. *Beecher Mnfg. Co. v. Atwater Mnfg. Co.*, p. 115.

Mr. Francis Rawle, for Appellee. *Stephenson v. Brooklyn R. R. Co.*, p. 81.

Mr. James H. Raymond, for Appellee. *Safety Valve Co. v. Kunkle*, p. 392.

Mr. John Walker Shortlidge, for Appellants. *Cantrell v. Wallick*, p. 323.

Mr. Wm. Edgar Simonds, for Appellees. *Butterworth v. Hill*, p. 54.

————— for Appellant. *Clark v. Beecher Mnfg. Co.*, p. 121.

Mr. Walter G. Smith, for Appellee. *Stephenson v. Brooklyn R. R. Co.*, p. 81.

Mr. Arthur Stem, for Appellants. *Miller v. Foree*, p. 194.

Mr. G. G. Symes, for Plaintiff. *Keyes v. Grant*, p. 347.

Mr. Benjamin F. Thurston for Appellant. *Stephenson v. Brooklyn R. R. Co.*, p. 79.

————— for Appellee. *Miller v. Foree*, p. 195.

————— for Appellants. *Brown v. Davis*, p. 213.

————— for Appellees. *Cartridge Co. v. Whitney Arms Co.*, p. 340.

————— for Defendants. *Keyes v. Grant*, p. 348.

Mr. George Tucker Bispham, for Appellant. *Eachus v. Broomall*, p. 177.

Mr. Walter E. Ward, for Appellant. *Pomace Holder Co. v. Ferguson*, p. 442.

Mr. E. T. Wells, for Defendants. *Keyes v. Grant*, p. 348.

Mr. E. A. West, for Appellees. *Newton v. Furst & Bradley Co.*, p. 451.

Mr. Edmund Wetmore, for Appellee. *Yale Lock Mnfg. Co. v. Sargent*, p. 265.

————— for Appellee. *Yale Lock Mnfg. Co. v. Sargent*, p. 278.

————— for Appellee. *Yale Lock Mnfg. Co. v. Greenleaf*, p. 314.

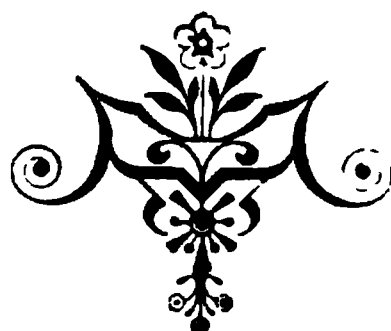
Mr. M. A. Wheaton, for Appellant. *California Paving Co. v. Schalicke*, p. 469.

Mr. J. M. Wilson, for Appellees. *Beecher Mnfg. Co. v. Atwater Mnfg. Co.*, p. 115.

Mr. E. E. Wood, for Appellants. *Brown v. Davis*, p. 213.

————— for Appellee. *Hapgood v. Hewitt*, p. 414.

Mr. William B. Wooster, for Appellee. *Electric Co. v. Ansonia Brass Co.*, p. 97.



DECISIONS
OF
THE SUPREME COURT
OF
THE UNITED STATES.
IN
PATENT CASES

ELECTRIC RAILROAD SIGNAL COMPANY, Composed
of FRANK L. POPE, STEPHEN C. HENDRICKSON and
JAMES D. LINCOLN, Surviving Partners, APPELLANTS,
v. HALL RAILWAY SIGNAL COMPANY.*

114 U. S. 87-103. Oct. Term, 1884.

[Bk. 29, L. ed. 96 ; 31 O. G. 515.]

Affirming *Ibid*, 6 Fed. Rep. 603.

Argued January 6, 7, 1885. Decided March 30, 1885.

Particular patent construed, limited, and held not infringed.

1. Letters patent, No. 140,536, issued July 1, 1873, to F. L. Pope, for an Improvement in Circuits for Electric Railroad Signals, construed to be a patent for a combination in which all the elements were known and open to public use. Its object was the accomplishment of a particular result—namely, to work electric signals on the block system. But the thing patented was the particular means devised by the inventor to accomplish that result, and to constitute in this case identity of invention,

*See Explanation of Notes, page III.

Syllabus.

and therefore infringement, the result, the elements or their equivalents, and the combination must be the same, so that each element shall perform the same function. (p. 6.)

2. In complainants' patent insulated sections of the rails as circuit-closers constitute an essential element in the combinations, the wheels and axles of the train forming an electrical connection between the opposite insulated rails at appropriate places, and so actuating the signal. The defendants dispense with insulated sections of the track and employ a separate instrument placed near the track from which a lever connects with the track, and is operated by the passing wheels of the train. (p. 18.)
3. In complainants' patent a single battery is used to operate an electric circuit of considerable length by means of two wires or other metallic conductors attached to the positive and negative poles of the battery and suitably insulated from each other and from the earth. The defendant's plan does not include such a metallic circuit, but uses a circuit composed in part of the earth. In this case the evidence shows the difference is more than a mere substitution of the earth for one of the conducting-wires. It consists in the use of new elements, a new combination, and a new result. On the ground therefore of the two points mentioned, the defendants do not infringe. (p. 20.)

[Citations in the opinion of the court:]

- Prouty v. Ruggles*, 16 Pet. 336 [4 Am. & Eng. 351.] p. 19.
Silsby v. Foote, 14 How. 217 [5 Am. & Eng. 411.] p. 19.
McCormick v. Talcott, 20 How. 402 [6 Am. & Eng. 410.] p. 19.
Vance v. Campbell, 1 Black, 427 [7 Am. & Eng. 117.] p. 19.
Eames v. Godfrey, 1 Wall. 78 [7 Am. & Eng. 158.] p. 19.
Dunbar v. Meyers, 94 U. S. 187 [11 Am. & Eng. 59.] p. 19.
Fuller v. Yentzer, 94 U. S. 288 [11 Am. & Eng. 138.] p. 19.
Imhaeuser v. Buerk, 101 U. S. 647 [12 Am. & Eng. 443.] p. 20.
Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.] p. 20.
Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.] p. 20.
Gould v. Rees, 15 Wall. 194 [9 Am. & Eng. 39.] p. 20.
Gill v. Wells, 22 Wall. 1 [9 Am. & Eng. 471.] p. 20.
McMurray v. Mallory, 111 U. S. 97 [p. 171 *ante.*] p. 20.
Fay v. Cordesman, 109 U. S. 408 [p. 1 *ante.*] p. 20.
Electric Telegraph Co. v. Brett, 10 Com. Bench, 838. p. 25.

Argument of counsel.

Appeal from the Circuit Court of the United States for the District of Connecticut.

The history and facts of the case appear in the opinion of the court.

Messrs. Chas. E. Perkins, Geo. Christy, and F. Chamberlain, for appellants :

An examination of the drawing of Pope's exhibit and the apparatus erected by the defendants and claimed to be an infringement, makes it apparent that they are alike in every particular but this, viz : The positive and negative conductors shown in Pope's drawing are of continuous wire, so that the electric current travels along wires through the whole of both circuits, while the defendants use similar positive and negative conductors of wire but not continuously, part of the circuit is formed by one of the wires or conductors, in this case the negative one, being connected with the earth, so that the earth enters into and forms part of the circuit.

The combination shown in both drawings has the same elements, and works in the same way in actuating the signals in each, but it is claimed by the defendants that this substitution of the earth for a part of the wire, makes a new and different invention from that of Pope.

It will be noticed that no particular kind of conductor is claimed in Pope's patent. It says, "two wires *or other conductors*, one attached to the positive and negative poles of the battery B."

But the defendants claim that they are using a different invention from Pope's because they say that by using the earth as part of the circuit, *the resistances of the different circuits are equalized better* than by the use of all wire as shown in Pope's drawing. That is to say, that *although they use the whole combination that Pope patented*, yet because they equalize the resistances in a different manner from that pointed out in his patent, they do not *use his invention*.

Now this equalization of distances is no part of Pope's

Argument of counsel.

invention. It is not mentioned or referred to in any of the claims. It is only a matter of detail in the adjustment of the several circuits, and is so stated in his specification.

As it appears, therefore, that the defendants use exactly the same combinations as those described in the claims of Pope's patent, and that the only differences are mere matters of detail, not parts of the invention, it is clear that the defendants infringe.

Mr. Simeon E. Baldwin, for appellee:

The defendant, if we assume the patent, No. 140,536, to be valid, and to be owned by the plaintiff, has not infringed the combination patented. The complainant's system was an entire metallic circuit, and makes insulated sections of the rails a part of it; the defendant's system never uses the rails as part of the circuit, and always includes the earth. The complainant's system closes the circuit by the contact of the wheels and axle of a passing train, or of a connecting rod moved by a switchman, with the insulated rails on either side of the track. The defendant's system closes the circuit by causing two springs outside of the track and unconnected with it, to be brought together by the action of a lever depressed by a moving train, whereby a circuit is established through wires running over or under the track.

Mr. Pope's patent cannot be infringed save by the use of every one of the necessary elements of his combination, or their known equivalents. The circuit formed without rails cannot be deemed to perform "the same function in substantially the same way" as the circuit formed by rails.

"The same result may be reached by different processes, each of them patentable, and one process is not infringed by the use of any number of its stages less than all of them." *Goodyear D. V. Co. v. Davis*, 102 U. S. 222 [12 Am. & Eng. 524.]

Mr. Pope has not patented the idea of operating a series of signals by the use of a single battery. "The idea he could not patent, but his contrivance to make it practically

Argument of counsel.

useful he could. By his patent he appropriated to himself only so much of the field of invention, which his idea embraced, as was covered by the machine, described in his specification, and claimed in his application." *Wicke v. Ostrum*, 103 U. S. 461 [13 Am. & Eng. 114.]

No one can infringe his rights who does not use all the parts of his combination, or what are known as equivalents for all of them. *Prouty v. Ruggles*, 16 Pet. 336 [4 Am. & Eng. 351;] *McMurray v. Mallory*, 111 U. S. 97 [15 Am. & Eng. 171.]

It is not open to him now to say that conductor Z may be dispensed with, and his patent still be infringed. *Vance v. Campbell*, 1 Black, 427 [7 Am. & Eng. 117.]

"The courts of this country cannot always indulge the same latitude which is exercised by English judges, in determining what parts of a machine are or are not material. Our law requires the patentee to specify particularly what he claims to be new; and if he claims a combination of certain elements or parts, we cannot declare that any one of these elements is immaterial. The patentee makes them all material by the restricted form of his claim." *Water-Meter Co. v. Desper*, 101 U. S. 332 [12 Am. & Eng. 380;] *Gage v. Herring*, 107 U. S. 640 [14 Am. & Eng. 454;] *Bridge Co. v. Excelsior Co.*, 105 U. S. 618 [14 Am. & Eng. 112;] *Fay v. Cordesman*, 109 U. S. 408 [15 Am. & Eng. 1.]

The patentee of a combination of old elements may doubtless invoke the doctrine of equivalents, but how can grounding a wire at the foot of a battery, in order to equalize the circuits in an apparatus for operating electric railroad signals automatically and successively by the use of one battery, be deemed to have been, at the date of the Pope patent "well known as a proper substitute" for continuing that wire, insulated on poles or otherwise, so arranged as to form a series of unequal circuits, for a distance of miles along the track of the railroad. *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290;] *Gould v. Rees*, 15 Wall. 187 [9 Am. & Eng. 39.]

We did not use the earth simply to take the place of a

Opinion of the court.

wire, in order to conduct an electric force from one point to another. We used it to fulfil a function which that wire could never fulfil, namely, to make every electric circuit in the whole apparatus exactly equal in length, and therefore in resistance.

Mr. Justice MATTHEWS delivered the opinion of the court:

This is a bill in equity for an injunction to restrain the alleged infringement of letters patent, No. 140,536, for an improvement in Circuits for Electric Railroad Signals, issued July 1, 1873, to Frank L. Pope, of whom the appellants, who were complainants below, are assignees. On final hearing the bill was dismissed by a decree now brought here for review by this appeal.

The drawing which accompanies and illustrates the patent is as follows:

The following is the substantial part of the specification, together with the claims:

“My invention consists in a peculiar arrangement of electric circuits, in combination with a battery, and with two or more circuit-closers operated by moving trains or otherwise, whereby a series of two or more visual or audible signals, situated at intervals along the line of a railroad, may be operated by currents of electricity derived from a single battery, thereby obviating the inconvenience and expense of employing, as heretofore, one or more separate batteries situated at or near each signal for the purpose of actuating the same.”

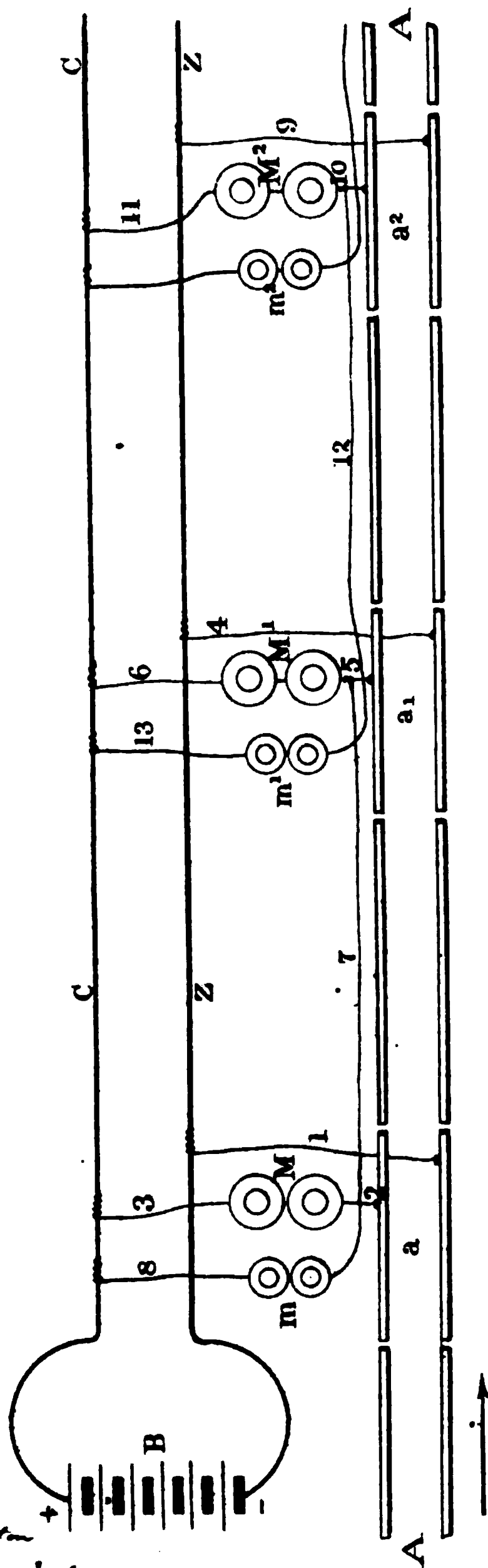
“In the accompanying drawing, AA represents a portion of the track of a railroad. At intervals of, say a mile, more or less, sections of said tract, a , a' , a'' , are electrically insulated from the remainder in a manner well understood, and therefore requiring no detailed description. B is a galvanic battery, of any suitable construction, and placed in any convenient location near the line of the railroad. Two

F. L. POPE.

Circuits for Electric Railroad Signals.

No. 140,536.

Patented July 1, 1873.



Witnesses:

Geo. A. Hamilton
Stephen C. Henderson

Inventor:

Frank L. Pope

Opinion of the court.

wires or other conductors, C and Z, are attached to the positive and negative poles, respectively, of the battery, B, and extended to any required distance in a direction parallel or nearly so to the line of the railroad. The conductors C and Z may be placed on poles and should be suitably insulated from each other and from the earth. The conductors, C and Z are virtually prolongations of the positive and negative poles of the battery, B. Each of the insulated sections of track, *a*, *a'*, *a''*, etc., is placed at some point at or near which it is desired to erect a signal, and any required number of these may be employed to meet the requirements of any particular case. M, M' and M'' are the electro-magnets, which actuate or display the respective signals. The said signals may be of any suitable construction, and should be provided with some suitable means of retaining them in position or action after the circuit through the magnets, M, M', or M'' has been interrupted. *m*, *m'*, and *m''* are magnets so arranged as to release, reverse, or stop the action of said signals, which have previously been brought into action by the magnets, M, M', and M''.

“The operation of the apparatus is as follows: Suppose a train moving along the track, A A, from left to right in a direction indicated by the arrow. Upon reaching the point, *a*, the wheels and axles of the train will form an electrical connection between the opposite insulated rails, and a circuit will be formed between the conductor, C, and the conductor, Z, traversing wires, 1 and 2, magnet M, and wire, 3, and the signal attached to M will consequently be displayed. Upon the arrival of the train at *a'* the same operation will be repeated, and another connection formed between C and Z, traversing the wires, 4 and 5, magnet, M', and wire, 6, while at the same time a portion of the current will traverse the branch wire, 7, magnet, *m*, and wire, 8. Thus the signal attached to M' will be actuated, and simultaneously the action of the magnet *m* will release or reverse the action of the first mentioned signal. Upon reaching the point *a''* the clos-

Opinion of the court.

ing of the circuit by the train will, in like manner, cause the signal attached to M' to be displayed and the signal last displayed by M' to be withdrawn. In this manner any required number of such signals may be operated by means of a single battery.

“The respective resistances of the several circuits should be so adjusted that they will be as nearly as possible equal to each other, as a much more perfect action of the apparatus will be secured thereby.

“On a railroad having a double track two separate series of signals, one series for each track, may be connected with the conductors, C and Z, of a single battery, if required. If preferable they may be also operated by means of separate batteries and separate conductors.

“In cases where it is required to operate a large number of signals, extending along the road for a distance of many miles, the two conductors, C and Z, may be extended the entire distance, and a number of batteries attached at convenient intervals, say, for instance, from five to ten miles apart. The several batteries should all be placed with their positive poles in connection with the wire, C, and their negative poles in connection with the wire, Z, when they will virtually form one large battery, and the principle of operation will remain the same as that hereinbefore described.

“I do not desire to confine myself to the use of any particular form of visual or audible signals, nor to the particular devices herein described for closing the electric circuit at points from which a signal is to be operated. Instead of the circuit being closed automatically by the train itself, it may be closed by a signalman by means of a key or switch, or otherwise.

“I claim as my invention—

“1. The battery, B, in combination with the positive and negative conductors, C and Z, two or more electro-magnets, M, M' , M'' , for actuating or causing to be actuated visual or audible signals, and two or more circuit-closers, a , a' , a'' ,

Opinion of the court.

placed at intervals along the line of a railroad, substantially as and for the purpose specified.

“2. The battery, B, in combination with the positive and negative conductors, C and Z, two or more electro-magnets, m , m' , m'' , for releasing or reversing visual or audible signals, and two or more circuit-closers, a' , a'' , placed at intervals along the line of a railroad, substantially as and for the purpose specified.

“3. The combination of the battery, B, conductors, C and Z, circuit-closer, a , and electro-magnet, M, for actuating a visual or audible signal, with the circuit-closer, a' , wires, 5, 7, and 8, and electro-magnet, m , for reversing, releasing, or stopping said signal, substantially as specified.”

Among several defences set up in the answer, the two chiefly relied on were first, that Thomas S. Hall, and not Pope, the patentee, was the first inventor of the improvement claimed; and, second, that the devices used by the defendants were not an infringement of the patent.

The decree below was based on the first of these defences alone, the Circuit Court finding that Hall was entitled in law to priority of invention; but we have not found it necessary to discuss the questions of fact and law embraced in this issue, as we have concluded to dispose of the case upon the ground that the defendants did not, by the devices used by them, infringe the patent of the complainants.

These devices are illustrated by a drawing, of which the following is a copy:

This diagram represents the plan of electric railroad signals, placed and put in practical operation, by the defendants, on the line of the Eastern Railroad near Boston, prior to the bringing of this suit. In comparing it with the drawing annexed to the patent, it is to be remembered that the latter represents a series of double signals in succession on the line of a railroad track, divided into blocks, while Exhibit C represents but one pair of such signals in one such block. To make it correspond with the other, as a representation,

Opinion of the court.

it should be imagined as being repeated in several successive blocks, constituting portions of one circuit, closed at fixed points by circuit-closers for that purpose.

Mr. Pope, the patentee, drew this diagram and, as a witness on behalf of the complainants, explains it in comparison with the plan described in the patent, with a view to establish their identity. He says:

“I have made a diagram which exhibits the apparatus which I examined, or so much of it as is material to this case, which I annex, and is marked Exhibit C.

“A battery of perhaps one hundred cells is placed in the station building at Chelsea. One pole of this battery—I think the negative pole—is connected to the earth.

“A conductor is attached to the other or positive pole of the battery, consisting of an insulated wire extending along parallel with the track upon poles. This wire which I examined extended toward Boston, the end remote from Chelsea being disconnected, or, as it is termed, open. A second conductor, consisting of another similar wire insulated and attached to the same poles, was arranged parallel to the first one. The second wire was open at Chelsea and connected with the earth at its remote end.

“The first mentioned wire I have shown in the diagram, and marked ‘positive conductor;’ the second wire is marked ‘negative conductor.’ At a short distance from the station a semaphoric signal is placed, consisting of a red disk balanced upon a lever. This was placed in the cupola of a small building at the side of the track. An electro-magnet was arranged with its armature attached to said lever, so that when brought into action the red disk on the other end of the lever would be moved into a position to render it visible through an opening in the cupola. A latch or detent was placed in a position to fasten the lever after the action of the magnet had ceased, and thus continue the exhibition of the signal. A circuit-closer was placed upon the track at a point near the signal, which consisted of a lever so

Earth.

Earth.

Opinion of the court.

placed as to be depressed by the wheels of a passing train, which movement caused the circuit to be closed by pressing two springs together. When the circuit was thus closed by a passing train a connection was formed between the positive and negative conductors, and the electric current, in passing from one to the other, passed through and operated the magnet by which the signal was displayed. At a point perhaps a mile distant, another signal was arranged in precisely the same manner, in connection with a second circuit-closer and the same positive and negative conductors. An additional circuit-closer placed upon the track in the vicinity of this last-named signal, was arranged to form a connection from the positive to the negative conductor by the way of a third wire running upon the poles back to the signal first mentioned, where it passed through and operated a second magnet, which lifted the latch or detent and allowed the disk to return to a position concealing it from view. I examined two of these signals and saw many others along the line of the road.

“I find in this arrangement thus described the combination claimed in the first claim of said patent, consisting of a battery in combination with positive and negative conductors, two or more electro-magnets for operating visual signals and two or more circuit-closers placed at intervals along the line of the railroad ; also the combination claimed in the second claim of the patent, consisting of a battery in combination with positive and negative conductors, two or more electro-magnets for reversing visual signals, and two or more circuit-closers placed at intervals along the line of the railway. I also find the combination claimed in the third claim, of a battery, positive and negative conductors, a circuit-closer, and electro-magnet for actuating a signal, with a second circuit-closer, wires, and a magnet for reversing said signal.”

Mr. Moses G. Farmer, an expert witness on behalf of the complainants, makes the same comparison with the result,

Opinion of the court.

according to his opinion, of establishing that the defendants' system is essentially the invention described in the patent.

On the other hand Prof. Henry Morton, an expert witness on behalf of the defendants, points out two particulars in which the plan as practiced by the defendants and shown in Exhibit C differs from that of the Pope patent so materially that they cannot be considered substantially the same.

The first of these is that, in the patent, insulated sections of the railroad track, used, when covered by a locomotive or cars, as a circuit-closer, are made essential to the combinations claimed, while they are dispensed with in the Hall system, other and independent circuit-closers being employed.

The second is thus described by Prof. Morton in his testimony.

"I also find a difference between the plan described in the patent and that shown in Exhibit C in another regard ; in the plan of the patent the conductors, C and Z are connected respectively with the positive and negative poles of the battery, or, as the patent itself states, 'are virtually prolongations of the positive and negative poles of the battery.'

"In the plan shown in Exhibit C, however, the conductor, C, or positive conductor only, is connected with the battery, the other conductor, Z, or, as it is called, negative conductor, having no connection with the battery. In consequence of this difference of arrangement, in the system of the patent, the positive conductor, C carries the positive current in one direction away from the battery ; and the other, or negative conductor, Z, brings the positive current in the opposite direction, or back to the battery, and thereby involves the production of circuits of different resistance for each station. In the system represented in Exhibit C, on the other hand, both the conductors, C and Z, serve to carry the positive current in the same direction away from the battery, and should therefore properly be both called posi-

Opinion of the court.

tive conductors. As a result of this arrangement the current always passes through the same or equal circuits no matter at which station the connection is made, simply changing from one to the other of these equal parallel wires at the station where the contact is effected.

“It is for this reason that in this system no equalization of resistance, in the sense involved in the description of the patent, is required.”

It is upon these two points that the question of infringement depends.

In considering them it is important to bear in mind that the patent is for a combination merely, in which all the elements were known and open to public use. No one of them is claimed to be the invention of the patentee. He does not claim them himself as separate inventions. It is simply a new combination of old and well-known devices, for the accomplishment of a new and useful result, that is claimed to be the invention secured by the patent. And the well-settled principles of law heretofore applied to the construction of patents for combinations merely, must apply and govern in the present case.

The object of the patented combination was the accomplishment of a particular result, that is, to work electric signals on what was known as the “block” system, by means of circuits, operated by a single battery instead of many. But this result or idea is not monopolized by the patent. The thing patented is the particular means devised by the inventor by which that result is attained, leaving it open to any other inventor to accomplish the same result by other means. To constitute identity of invention, and therefore infringement, not only must the result attained be the same, but in case the means used for its attainment is a combination of known elements, the elements combined in both cases must be the same, and combined in the same way, so that each element shall perform the same function, provided, however, that the differences alleged are not merely color-

Opinion of the court.

able, according to the rule forbidding the use of known equivalents.

The first question we have to consider upon the issue as to infringement is, whether insulated sections of the rails, as circuit-closers, constitute an essential element in the combinations described in the patent. And that question we are constrained to answer in the affirmative.

These insulated sections of track are shown and marked on the drawing which accompanies the specification, and in its descriptive part they are referred to as parts of the arrangement. It says: "At intervals of, say a mile, more or less, sections of the said track, *a*, *a'*, *a''*, are electrically insulated from the remainder in a manner well understood, and therefore requiring no detailed description." And again: "Each of the insulated sections of track, *a*, *a'*, *a''*, etc., is placed at some point at or near which it is desired to erect a signal, and any required number of these may be employed to meet the requirements of any particular case." And in describing the operation of the apparatus, it further says: "Upon reaching the point *a*, the wheels and axles of the train will form an electrical connection between the opposite insulated rails," etc. "Upon reaching the point, *a'*, the closing of the circuit by the train will in like manner cause the signal attached to *M'* to be displayed, and the signal last displayed by *M'* to be withdrawn." It is true that the patentee also says, in the specification: "I do not desire to confine myself to the use of any particular form of visual or audible signals, nor to the particular devices herein described for closing the electric circuit at points from which a signal is to be operated;" but that he does not thereby indicate any intention of dispensing with insulated sections of the track, as a necessary part of the mode of forming and closing the circuit, appears from what immediately follows: "Instead of the circuit being closed automatically by the train itself, it may be closed by a signalman by means of a key, or switch, or otherwise."

Opinion of the court.

This language evidently implies that the insulated sections of the track are constant factors in the plan, the only alternatives proposed having reference, not to a substitute for them, but merely to another mode of using them in closing the circuit. So in each of the three claims, the circuit-closers, *a*, *a'*, *a''*, or one or more of them, are expressly named as part of the combination claimed as the invention of the patentee. The use of insulated sections of the railroad track thus repeatedly appears in every part of the specifications as an unchangeable and characteristic feature of the invention, and there is nothing in the state of the art at that date, as disclosed in the evidence, to show that the patentee would have been justified in applying, or that, if he had applied, an application would have been sanctioned by a grant of a patent for a combination as large and undefined as that now claimed by implication and construction, so as to cover every form of a circuit-closer then known or thereafter invented. For that employed by the defendants as part of the Hall system was not only not known and in use at the date of the patent, but was a device invented by Hall himself or one by Snow, for which the latter obtained a patent dated October 21, 1873. It dispenses altogether with the use of insulated sections of the track, and employs instead a separate instrument placed near the track, and worked by means of a lever connected with the track, so that the wheels of locomotives and cars passing on the track depress the outer end, the lever being raised again and held up after the train has passed by means of a spring which holds it in place.

Upon this point, the case seems to fall clearly within the rule declared in *Prouty v. Ruggles*, 16 Pet. 336 [4 Am. & Eng. 351;] *Silsby v. Foote*, 14 How. 217 [5 Am. & Eng. 411;] *McCormick v. Talcott*, 20 How. 402 [6 Am. & Eng. 410;] *Vance v. Campbell*, 1 Black, 427 [7 Am. & Eng. 117;] *Eames v. Godfrey*, 1 Wall. 78 [7 Am. & Eng. 158;] *Dunbar v. Meyers*, 94 U. S. 187 [11 Am. & Eng. 59;] *Fuller v. Yentzer*,

Opinion of the court.

94 U. S. 288 [11 Am. & Eng. 138;] *Imhaeuser v. Buerk*, 101 U. S. 647 [12 Am. & Eng. 443;] *Gage v. Herring*, 107 U. S. 640 [14 Am. & Eng. 454;] *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290;] *Gould v. Rees*, 15 Wall. 194 [9 Am. & Eng. 39;] *Gill v. Wells*, 22 Wall. 1 [9 Am. & Eng. 471;] *McMurray v. Mallory*, 111 U. S. 97 [15 Am. & Eng. 171;] *Fay v. Cordesman*, 109 U. S. 408 [15 Am. & Eng. 1.]

On the second branch of the issue as to infringement, we think the case is quite as clearly for the defendants. In the patent, the entire circuit, operated by the single battery, and which is closed at intermediate points for the purpose of displaying and concealing the signals, is described as formed by means of two wires or other conductors, C and Z, attached to the positive and negative poles of the battery, extended to any required distance in a direction parallel, or nearly so, to the line of the railroad. These wires may be placed on poles, it is said, and should be suitably insulated from each other and from the earth, and they are declared to be virtually prolongations of the positive and negative poles of the battery. Throughout the two conductors are designated as metallic, and insulated from the earth, and they are embraced under that description in each of the claims. On the other hand, the defendants' plan does not include a metallic circuit, composed of two conductors, as thus described, but uses a circuit composed in part of the earth itself. The material difference in the principle or mode of operation of the two plans, as distinguished in this particular, is indicated by Prof. Morton in the extract from his testimony already quoted. It will become more apparent on further explanation.

The object proposed by the plan of the patent is, to operate with one battery instead of several, along the line of a railroad, an electric circuit of considerable length, divisible into a number of subsidiary circuits, for the display of signals at many stations, by means of circuit-closers operated automatically by passing trains, in definite and predeter-

Opinion of the court.

mined succession. It is obvious that the battery must have sufficient power, being placed at one end of the entire circuit, to operate efficiently at the other extremity. The force necessary for that purpose would be much greater than would be needed for the subsidiary circuits, all of which, it will be observed, are different in length ; and this difference of force in the battery might be so great owing to the required length of the whole circuit, as, when expended upon a shorter intermediate circuit, to destroy its capacity for working the signals by overheating. It becomes, therefore, a matter of importance, in some way, to equalize the resistance of these varying circuits. The patent itself contemplates this necessity, and undertakes to make provision for it. It is said in the specification that "the respective resistances of the several circuits should be so adjusted that they will be as nearly as possible equal to each other, as a much more perfect action of the apparatus will be secured thereby." The specification does not point out any particular methods for that purpose, but it is stated in the evidence of experts that such means were well known at the time and in common use ; such as by varying the dimensions of the wire on the magnets, or the introduction of resistance coils into the nearer circuits. These devices would be independent of the apparatus described in the patent, and would have to be adjusted to the peculiar situation of each line of signals in practical use.

In the Hall system, as used by the defendants, no such necessity exists. According to that plan, there is no necessity of equalizing the resistance of the several sub-circuits, for they are all exactly equal by their construction, as the electric fluid in working the signal at any point, when a sub-circuit has been formed by a circuit-closer, nevertheless traverses the whole extent of the large circuit, and returns by means of the connections formed by the earth to the battery. So that, in effect, the Hall plan forms its apparatus, counting the connection through the earth, as

Opinion of the court.

though it were a continuous wire, as it might be, by means of three lines of conductors, of which two are combined by connecting wires with the magnets which operate the signals, at points where the circuit is closed for that purpose, carrying the positive electricity throughout the whole distance to the extreme point of the entire circuit, and then returning it by the third line, which is the connection by means of the earth. And, inasmuch as a wire might be used for this purpose, instead of the earth, it would then show three metallic conductors; and Mr. Farmer, the complainants' expert, is quite right in saying, as he does, that the equalization of the resistances in the several sub-circuits, accomplished in the plan of Hall, "is due to the arrangement of the wires wholly, and not at all to the fact that the earth is used as a portion of the conductor."

This arrangement is altogether unlike that of the patent. It introduces into the plan of the defendants new elements, a new combination, and a new result. The two wire conductors are not the same, for, in the patent, one conducts positive electricity, the other returns the current and completes the circuit, while, in the other, both the metallic conductors carry the current forward while the earth returns it, and in this mode the *desideratum* is obtained of securing equality of resistance by making all the circuits equal in size.

The device cannot be regarded as a substitute or an equivalent for anything contained in the complainants' patent. It is of itself an independent invention, and, as such, forms the sole subject of a patent granted to Hall and Snow, July 13, 1875. To explain more satisfactorily the mode of its operation, so as to show that it differs substantially from the arrangement of the complainants, the descriptive parts of the Hall and Snow patent and the attached drawings are here given :

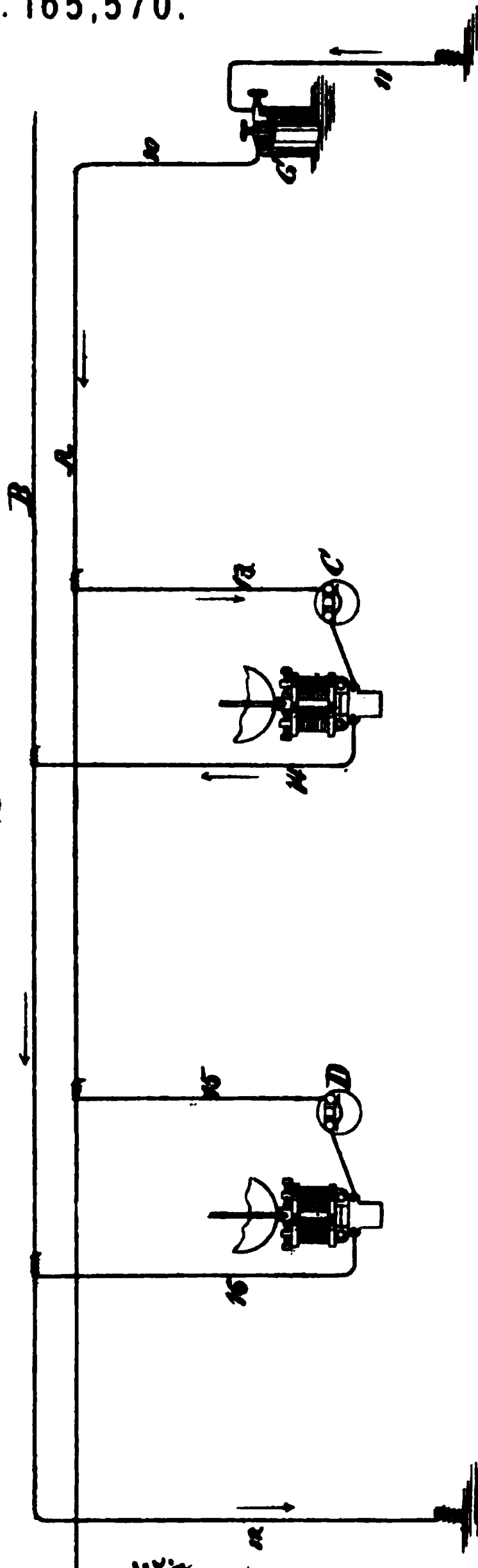
"In the drawing, the letters A B designate two wires which extend along the line of a railroad track, or in other

T. S. HALL & G. H. SNOW.
Circuits for Electric-Signals

No. 165,570.

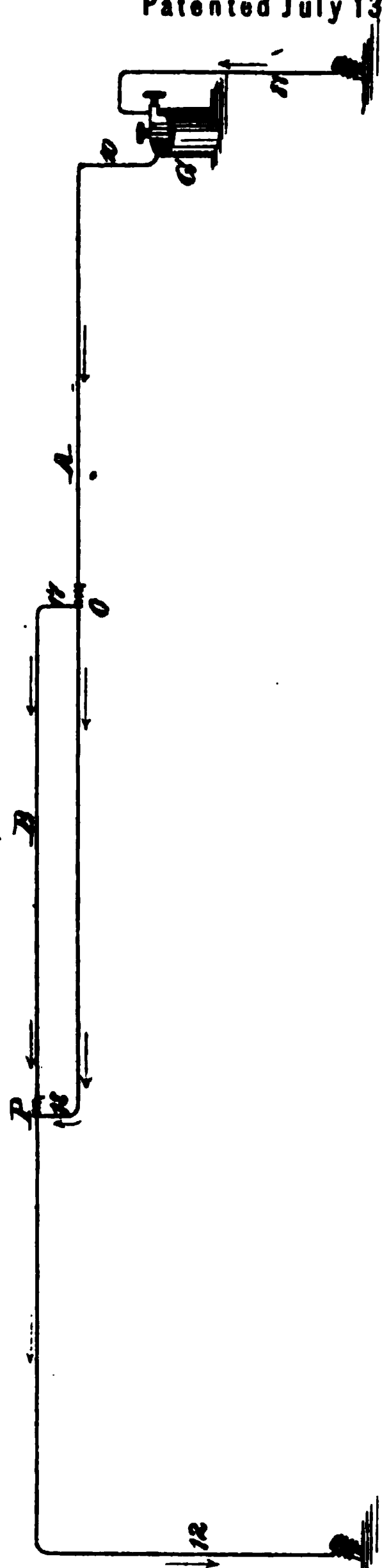
Patented July 13, 1875

Fig. 1.



Witnesses.
Chas. Wahlen.
Otto Stufeland

Fig. 2.



Inventors.
Thomas S. Hall
George H. Snow
Van Santvoord & Hauff
attorneys

Opinion of the court.

words form the line wires of a telegraph line. The wire A connects by a wire, 10, with one—say, the positive—pole of a galvanic battery, G, and the other pole of this battery connects by a wire, 11, with the ground. The battery G is supposed to be situated at one end of the line, and at the opposite end of said line the wire B is made to connect by a wire, 12, with the ground. Along the line are distributed a series of keys or circuit-closers, C D, each of which is connected with the line-wires, A B, the connection of the circuit-closer C being effected by wires 13 and 14, and that of the circuit-closer D by wires 15 and 16. If the circuit is closed through the circuit-closer C, the current passes from the battery through wire 10, line-wire A, wire 13, circuit-closer C, wire 14, line-wire B, and wire 12 to the ground, and through the ground and wire 11 back to the battery. If the circuit is closed through the circuit-closer D, the current from the battery passes through wires 10, A, 15, circuit-closer D, wires 16, B, and 12 to the ground, and through the ground and wire 11 back to the battery.

“From these two examples it will be seen that whenever the circuit is closed along the line the electric current has to traverse the whole circuit, and consequently the resistance is the same in all cases.”

It thus clearly appears that the difference in this particular between the invention claimed by the complainants and the alleged infringement is a difference in the arrangement of the parts and in the principle of the combination, with different elements performing different functions; and that the difference is something more than the mere substitution of a connection by means of the earth for one of the conducting wires. The case is, therefore, clearly distinguishable from that of *Electric Telegraph Company v. Brett*, 10 Com. Bench, 838, cited and relied on by counsel for the appellants as in point, where the substitution of the earth for a wire as a conductor, being the sole difference, was held, under the English patent laws, not to be sufficient to de-

Notes and citations.

roy that identity between the two competing devices which constituted in that case the infringement alleged, although the patent itself called only for metallic conductors. Were that the only difference between the two plans under examination in the present case, there might still be question, in view of our own patent laws, whether the patentee had not made a wholly metallic circuit a necessary part of his combination, to be determined by considerations which we have not thought it necessary to bring into view as bearing upon that point. For, as we have seen, the difference on which we ground our conclusion that the defendants are shown not to have infringed the complainants' patent, in this particular, is, not merely that they have used the earth for the return of the current that completes the circuit, instead of a metallic conductor, but that they have arranged their conductors, in reference to the battery, the magnets, the rails, and the earth, upon such a system, and with such relations and connections, that, in operating their signals by a single battery the circuits are equalized as to resistance; while in that of the plaintiffs the circuits are of unequal size and resistance, requiring for successful practical use the equalization of the resistances thus created by means of independent and additional devices. One plan proceeds upon the idea of unequal circuits, to be afterwards equalized; the other adopts and embodies the idea of avoiding the necessity of subsequent rectification by an original adjustment of equal resistances. The difference is inherent in the two combinations and is substantial.

On the ground that, in the two points mentioned, the defendants' system of signaling is shown not to be an infringement of that described in the patent of the appellants, *the decree of the Circuit Court dismissing the bill is affirmed.*

4 U. S. 102-103.

Patent in suit:

No. 140,536. Pope, F. L. July 1, 1873. Electric Railroad Signal.

Notes and citations.

OTHER SUITS ON SAME PATENT :

**Electric Railroad Signal Co. v. Hall Railway Signal Co., 1881. 6
Fed. Rep. 603.**

Cited :

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. p. 239.

Syllabus.

WILLIAM S. THOMSON ET AL., Trading as THOMSON, LANGDON & Co., APPELLANTS, v. GEORGE H. WOOSTER.*

114 U. S. 104-120. Oct. Term, 1884.

[Bk. 29, L. ed. 105 ; 31 O. G. 913.]

Argued December 1, 2, 1884. Decided March 30, 1885.

Decree pro confesso. Estoppel. Reissue. Allegations in bill. Original patent in evidence. Accounting—estimation of profits. Affidavits as grounds to reopen case. Practice. Equity rule 18.

1. The appellee, complainant below, filed his bill alleging infringement of certain letters patent, reissued, for an Improved Folding Guide for Sewing Machines. The defendants appeared by their solicitor, but filed no answer and made no defence, and a rule that the bill be taken *pro confesso* was entered, and a decree duly made to the effect that the letters patent were valid, that defendants had infringed them, and that complainant recover the profits and damages. Under this decree the parties went before the master, whose report found certain damages and profits, and, on exceptions, the court made a decree allowing the profits, but disallowing the damages. On the appeal therefrom, assigning reasons for reversal relating to the account before the master and his report thereon, and relating to the invalidity of the reissue for want of identity with the original and delay in procuring the reissue, the decree was affirmed, that the defendants were concluded by the decree from attempting to show the invalidity of the reissue for the reasons alleged, and because the exceptions to the master's report were overruled. (p. 33.)
2. Under the equity rules prescribed by the Supreme Court the defendants are concluded by the decree *pro confesso*, so far at least as it is supported by the allegations of the bill, taking the same to be true. They are barred and precluded from questioning its correctness on appeal, unless on the face of the bill

*See Explanation of Notes, page III.

Syllabus.

it appears manifest that it was erroneous and improperly granted. (p. 37.)

3. The decree having declared the reissued patent to be valid, the attempt to show before the master that it was for a different invention from that described in the original patent, or that it was void for unreasonable delay, was inadmissible. Nor can facts (the original patent) not embraced in the allegations of the bill be introduced on appeal for the purpose of countervailing the decree. (p. 41.)
4. The fact that the reissue was applied for fourteen years after the date of the patent, if urged on defence against its validity, would have been strongly presumptive of unreasonable delay; but it might possibly have been explained, and the court, which did not have the original patent before it, could not say, as a matter of law, that it was unsusceptible of explanation. (p. 42.)
5. To the argument that the bill avers that the validity of the original patent was established in numerous suits during the fourteen years prior to reissue, thereby averring, substantially, that it was valid and operative, and that therefore the reissue, which is dependent on the invalidity or inoperativeness of the original patent, is void, the answer is that these suits may have pertained to parts of the invention as to which the specification was clear, full, and sufficient and the court cannot say as mere matter of law, that there was not defectiveness or insufficiency in the specification relating to other parts of the invention, or modes of using it and putting it into operation, which were not noticed until the application for reissue was made. (p. 42.)
6. Where on an accounting before a master it was objected that he allowed complainants the profits made by their patented machine for folding cloth as compared with folding by hand and there no evidence was produced of a folder open to the public adapted to the work done by defendants, the exception was overruled.

On objection that in estimating profits, the master did not take into account the fact that articles folded by others at a much lower rate than he had allowed, were articles of merchandise, *held*, that the evidence before the master did not show by

Syllabus

what process such folded strips were made, nor whether they were not really made by infringing complainant's patent, and the exception was overruled. (p. 44.)

7. Affidavits presented to the master or to the court below as grounds of the respective applications to reopen the proofs, cannot be looked into on this hearing on appeal. (p. 44.)
8. *Quære*, whether the existing eighteenth rule in equity providing that after a decree *pro confesso* "the cause shall be proceeded in *ex parte*," intended a different practice in respect to the right of the defendant to appear before the master from that contemplated by the former rules, which did not contain this *ex parte* clause. (p. 47.)

[Citations in the opinion of the court :]

- Keller, *Proced. Rom.* sec. 69. p. 37.
Hawkins v. Crook, 2 P. Wms. 556. pp. 37, 38.
Davis v. Davis, 2 Atk. 21. p. 38.
Williams v. Corwin, Hopkins Ch. Rep. 471. p. 38.
1 Smith's Ch. Pract. 153. p. 39.
1 Daniels Ch. Pr. 696, 1st ed. p. 39.
Ogilvie v. Hearne, 13 Ves. 463. p. 39.
Geary v. Sheridan, 8 Ves. 192. p. 41.
Rose v. Woodruff, 4 Johns. Ch. 547. p. 41.
Cawood Patent, 94 U. S. 710 [11 Am. & Eng. 235.] p. 46.
2 Dan. Ch. Pr. 804, 1st ed. p. 47.
2 Dan. Ch. Pr. 1358, 2d ed., by Perkins. p. 47.
Heyn v. Heyn, Jacob, 49. p. 47.
1 Hoff. Ch. Pr. 520 ; 1 Barb. Ch. Pr. 479. p. 47.
Nixon's Dig. Art. Chancery, sec. 21. p. 47.
Gen. Ord. Ch. XIV., 3-7. p. 47.
Brundage v. Goodfellow, 4 Halst. Ch. 513. p. 47.
Equity Rules, VI & X of 1822, 7 Wheat. VII. p. 48.
Pendleton v. Evans, 4 Wash. C. C. 336. p. 48.
O'Hara v. MacConnell, 93 U. S. 150. p. 48.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The history and facts of the case appear in the opinion of the court.

Messrs. J. C. Clayton and A. Q. Keasbey, for appellants :
The defence of lack of invention or non-patentability has

Argument of counsel.

been considered in this court, although not raised in the court below, by either pleadings or argument.

Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272;] *Slawson v. R. R. Co.*, 107 U. S. 649 [14 Am. & Eng. 475.]

The decree was merely a decree by default, or as *pro confesso*. It was not a consent decree. But it was held in *Pacific R. R. Co. v. Ketchum*, 101 U. S. 289, that even a consent decree could be appealed from.

“There can be no doubt that anything appearing upon the record, which would have been fatal upon a motion in arrest of judgment, is equally fatal upon a writ of error.”

Slacum v. Pomery, 6 Cranch, 221; *McAllister v. Kuhn*, 96 U. S. 87.

The reissue is invalid for unreasonable delay.

Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303;] *James v. Campbell*, 104 U. S. 356 [13 Am. & Eng. 341;] *Bantz v. Frantz*, 105 U. S. 160 [13 Am. & Eng. 542;] *Mnfg. Co. v. Stamping Co.*, 111 U. S. 319 [15 Am. & Eng. 238.]

All of these cases were decided after the appeal in this cause. They establish a new rule of law, requiring reasonable diligence, and clearly show the complainant's reissue, granted fourteen years and two months after date of original patent, is void as to these defendants.

The bill substantially avers that the original patent was valid and operative.

The statutes providing for a grant of a reissue expressly prescribe “invalidity” or “inoperativeness” as conditions precedent to the grant of a reissue.

Both these conditions precedent were lacking, and therefore the reissue is invalid.

Walker on Patents, §§ 221-224; *Whiteley v. Swayne*, 4 Fish. 123; *Wicks v. Stevens*, 2 Ban. & Ard. 318; *Giant Powder Co. v. Powder Co.*, 6 Sawy. 508; *Flower v. Rayner*, 5 Fed. Rep. 793; *Searls v. Bouton*, 12 Fed. Rep. 626.

The complainant must affirmatively show distinct profits due to the thing patented; if he fail he cannot recover anything as damages.

Argument of counsel.

Mowry v. Whitney, 14 Wall. 620 [9 Am. & Eng. 1;] *Mnfg. Co. v. Cowing*, 105 U. S. 253 [14 Am. & Eng. 1;] *Schilling v. Gunther*, 15 Blatch. 303; *Burdell v. Denig*, 92 U. S. 716 [10 Am. & Eng. 420;] *Mnfg. Co. v. Cowing*, 12 Blatch. 243; S. C. 14 Blatch. 315; *Black v. Munson*, 14 Blatch. 265.

Mr. Frederic H. Betts, for appellee:

No alleged erroneous rulings of the court below can be considered, unless perhaps those plainly apparent upon its face.

Kane v. Wittick, 8 Wend. 219; *Sands v. Hildreth*, 12 Johns. 493; *Henry v. Cuyler*, 17 Johns. 469; *Colden v. Knickerbocker*, 2 Cow. 31; *R. R. Co. v. Ketchum*, 101 U. S. 289.

Nor will an appeal from a decree founded on bill taken *pro confesso* ordinarily lie.

Murphy v. Ins. Co., 25 Wend. 249; *Hart v. Strong*, 15 Vt. 377.

No allegation can here be heard against the validity of the complainant's reissued patent.

The original patent may have been valid or operative in part, and yet sufficiently "inoperative" to require reissue.

Wilson v. Coon, 18 Blatch. 536; *Hartshorn v. Eagle Co.*, 18 Fed. Rep. 90; *Giant Co. v. Safety Co.*, 19 Fed. Rep. 509; *Gold & Stock Co. v. Wiley*, 17 Fed. Rep. 234.

The rule followed in calculating the savings and profits has had the full approval of this court.

Mowry v. Whitney, 14 Wall. 620 [9 Am. & Eng. 1;] *R. R. Co. v. Turrill* (Cawood Patent,) 94 U. S. 709 [11 Am. & Eng. 235;] *Mevs v. Conover*, 11 Off. Gaz. 1111 [11 Am. & Eng. 39;] *Black v. Thorne*, 111 U. S. 122 [15 Am. & Eng. 201.]

Mr. Justice BRADLEY delivered the opinion of the court: (a)

114 U. S. 109.

(a) 114 U. S. adds "after stating the facts in the foregoing language he continued:"

Opinion of the court.

The appellee in this case, who was complainant below, filed his bill against the appellants, complaining that they infringed certain letters patent for an improved folding-guide for sewing-machines, granted to one Alexander Douglass, of which the complainant was the assignee. The patent was dated October 5th, 1858, was extended for seven years in 1872, and was reissued in December, 1872. The suit was brought on the reissued patent, a copy of which was annexed to the bill, which contained allegations that the invention patented had gone into extensive use, not only on the part of the complainant, but by his licensees; and that many suits had been brought and sustained against infringers. The bill further alleged that the defendants, from the time when the patent was reissued down to the commencement of the suit, wrongfully and without license, made, sold, and used, or caused to be made, sold, and used, one or more folding-guides, each and all containing the said improvement secured to the complainant by the said reissued letters patent, and that the defendants derived great gain and profits from such use, but to what amount the complainant was ignorant, and prayed a disclosure thereof, and an account of profits, and damages, and a perpetual injunction.

The bill of complaint was accompanied with affidavits verifying the principal facts and certain decrees or judgments obtained on the patent against other parties, and Douglass' original application for the patent, made in April, 1856, a copy of which was annexed to the affidavits. These affidavits and documents were exhibited for the purpose of obtaining a preliminary injunction, which was granted on notice.

The defendants appeared to the suit by their solicitor, May 3, 1879, but neglected to file any answer, or to make any defence to the bill, and a rule that the bill be taken *pro confesso* was entered in regular course June 10, 1879. Thereupon, on the 2d of August, 1879, after due notice and

Opinion of the court.

hearing, the court made a decree to the following effect, viz.: 1st. That the letters patent sued on were good and valid in law; 2d. That Douglass was the first and original inventor of the invention described and claimed therein; 3d. That the defendants had infringed the same by making, using, and vending to others to be used, without right or license, certain folding-guides substantially as described in said letters patent; 4th. That the complainant recover of the defendants the profits which they had derived by reason of such infringement by any manufacture, use, or sale, and any and all damages which the complainant had sustained thereby; and it was referred to a master to take and state an account of said profits, and to assess said damages, with directions to the defendants to produce their books and papers and submit to an oral examination if required. It was also decreed that a perpetual injunction issue to restrain the defendants from making, using, or vending any folding-guides made as theretofore used by them, containing any of the inventions described and claimed in the patent, and from infringing the patent in any way.

Under this decree the parties went before the master, and the examination was commenced in October, 1879, in the presence of counsel for both parties, and was continued from time to time until November 3d, 1880, when arguments were heard upon the matter, and the case was submitted. On November 12th, the report was prepared and submitted to the inspection of counsel. On the 18th, motion was made by the defendants' counsel, before the master, to open the proofs and for leave to introduce newly discovered evidence. This motion was supported by affidavits, but was overruled by the master, and his report was filed December 10, 1880, in which it was found and stated that the defendants had used at various times, from January 18, 1877, to the commencement of the suit, twenty-seven folding-guides infringing the complainant's patent, and had folded 1,217,870 yards of goods by their use, and that during that period

Opinion of the court.

there was no means known or used, or open to the public to use, for folding such goods in the same, or substantially the same manner, other than folding them by hand, and that the saving in cost to the defendants by using the folding-guides was three cents on each piece of six yards, making the amount of profit which the complainant was entitled to recover, \$6,089.35; and that during the same period the complainant depended upon license fees for his compensation for the use of the patented device, and that the amount of such fees constituted his loss or damage for the unauthorized use of his invention; and that, according to the established fees, the defendants would have been liable to pay for the use of the folding-guides used by them during the years 1877, 1878, and 1879 (the period covered by the infringement,) the sum of \$1,350, which was the amount of the complainant's damages. The evidence taken by the master was filed with his report.

By a supplemental report, filed at the same time, the master stated the fact of the application made to him to open the proofs on the ground of surprise and newly discovered evidence (as before stated,) and that after hearing said application upon the affidavits presented, which were appended to the report, he was unable to discover any just ground therefor.

The defendants did not object to this supplemental report, but on the 10th of January, 1881, they filed exceptions to the principal report, substantially as follows :

1. That instead of the double guide or folder claimed in the complainant's patent being the only means for folding cloth or strips on each edge during the period of the infringement (other than that of folding by hand,) the master should have found that such strips could have been folded by means of a single guide or folder, and that the use of such guides was known and open to the public long before 1877, and that such guides were not embraced in the complainant's patent.

Opinion of the court.

2. That the amount of profits found by the master was erroneous, because it appeared that folded strips such as those used by the defendants were an article of merchandise, cut and folded by different parties at a charge of 25 cents for 144 yards.

3. That the profits should not have been found greater than the saving made by the use of the double guide as compared with the use of a single guide, or greater than the amount for which the strips could have been cut and folded by persons doing such business.

4. That the damages found were erroneous.

Other exceptions were subsequently filed, but were overruled for being filed out of time.

Before the argument of the exceptions the defendants gave notice of a motion to the court to refer the cause back to the master to take further testimony in reference to the question of profits and damages chargeable against them under the order of reference. In support of this motion further affidavits were presented.

The exceptions to the report and the application to refer the cause back to the master were argued together. The court denied the motion to refer the cause back, overruled the exceptions to the report, and made a decree in favor of the complainant, for the profits, but disallowed the damages. That decree is now brought here by appeal.

(b) The appellants have assigned fourteen reasons or grounds for reversing the decree. The first nine relate to the taking of the account before the master and his report thereon; the last five relate to the validity of the letters patent on which the suit was brought. It will be convenient to consider the last reasons first.

The bill, as we have seen, was taken *pro confesso*, and a decree *pro confesso* was regularly entered up, declaring that the letters patent were valid; that Douglass was the original inventor of the invention therein described and claimed;

114 U. S. 107-109.

(b) 114 U. S. begins opinion here.

Opinion of the court.

that the defendants were infringing the patent; and that they must account to the complainant for the profits made by them by such infringement and for the damages he had sustained thereby; and it was referred to a master to take and state an account of such profits and to ascertain said damages.

The defendants are concluded by that decree, so far at least as it is supported by the allegations of the bill, taking the same to be true. Being carefully based on these allegations, and not extending beyond them, it cannot now be questioned by the defendants unless it is shown to be erroneous by other statements contained in the bill itself. A confession of facts properly pleaded dispenses with proof of those facts, and is as effective for the purposes of the suit as if the facts were proved; and a decree *pro confesso* regards the statements of the bill as confessed.

By the early practice of the civil law, failure to appear at the day to which the cause was adjourned was deemed a confession of the action; but in later times this rule was changed, so that the plaintiff, notwithstanding the contumacy of the defendant, only obtained judgment in accordance with the truth of the case as established by an *ex parte* examination. Keller, *Proced. Rom.* § 69. The original practice of the English Court of Chancery was in accordance with the later Roman law. *Hawkins v. Crook*, 2 P. Wms. 556. But for at least two centuries past bills have been taken *pro confesso* for contumacy. *Ibid.* Chief Baron Gilbert says: "Where a man appears by his clerk in court, and after lies in prison, and is brought up three times to court by *habeas corpus*, and has the bill read to him, and refuses to answer, such public refusal in court does amount to the confession of the whole bill. Secondly, when a person appears and departs without answering, and the whole process of the court has been awarded against him after his appearance and departure, to the sequestration; there also the bill is taken *pro confesso*, because it is presumed to be

Opinion of the court.

true when he has appeared and departs in despite of the court and withstands all its process without answering." Forum Romanum, 36. Lord Hardwicke likened a decree *pro confesso* to a judgment by *nil dicit* at common law, and to judgment for plaintiff on demurrer to the defendant's plea. Davis v. Davis, 2 Atk. 21. It was said in Hawkins v. Crook (*qua supra*,) and quoted in 2 Eq. Cas. Abr., 179, that "the method in equity of taking a bill *pro confesso* is consonant to the rule and practice of the courts at law, where, if the defendant makes default by *nil dicit*, judgment is immediately given in debt, or in all cases where the thing demanded is certain; but where the matter sued for consists in damages, a judgment interlocutory is given; after which a writ of inquiry goes to ascertain the damages, and then the judgment follows." The strict analogy of this proceeding in actions of law to a general decree *pro confesso* in equity in favor of the complainant, with a reference to a master to take a necessary account, or to assess unliquidated damages, is obvious and striking.

A carefully prepared history of the practice and effect of taking bills *pro confesso* is given in Williams v. Corwin, Hopkins Ch. Rep. 471, by Hoffman, master, in a report made to Chancellor Sanford, of New York, in which the conclusion come to (and adopted by the Chancellor,) as to the effect of taking a bill *pro confesso*, was that "when the allegations of a bill are distinct and positive, and the bill is taken as confessed, such allegations are taken as true without proofs," and a decree will be made accordingly; but, "where the allegations of a bill are indefinite, or the demand of the complainant is in its nature uncertain, the certainty requisite to a proper decree must be afforded by proofs. The bill, when confessed by the default of the defendant, is taken to be true in all matters alleged with sufficient certainty; but in respect to matters not alleged with due certainty, or subjects which from their nature and the course of the court require an examination of details, the obligation to furnish proofs rests on the complainant."

Opinion of the court.

We may properly say, therefore, that to take a bill *pro confesso* is to order it to stand as if its statements were confessed to be true; and that a decree *pro confesso* is a decree based on such statements, assumed to be true, 1 Smith's Ch. Pract. 153, and such a decree is as binding and conclusive as any decree rendered in the most solemn manner. "It cannot be impeached collaterally, but only upon a bill of review, or [a bill] to set it aside for fraud." 1 Daniel's Ch. Pr. 696, 1st ed.; *Ogilvie v. Hearne*, 13 Ves. 563.*

Such being the general nature and effect of an order taking a bill *pro confesso*, and of a decree *pro confesso* regularly made thereon, we are prepared to understand the full force of our rules of practice on the subject. Those rules, of course, are to govern so far as they apply; but the effect and meaning of the terms which they employ are necessarily to be sought in the books of authority to which we have referred.

By our rules a decree *pro confesso* may be had if the defendant, on being served with process, fails to appear within the time required; or if, having appeared, he fails to plead, demur, or answer to the bill within the time limited for that

114 U. S. 111-112.

*Reference is made to the first edition of Daniell (pub. 1837,) as being, with the 2d edition of Smith's Practice (published the same year,) the most authoritative work on English Chancery Practice in use in March, 1842, when our Equity Rules were adopted. Supplemented by the General Orders made by Lords Cottenham and Langdale in August, 1841, (many of which were closely copied in our own Rules,) they exhibit that "present practice of the High Court of Chancery in England," which by our 90th Rule was adopted as the standard of equity practice in cases where the Rules prescribed by this court, or by the Circuit Court, do not apply. The 2d edition of Mr. Daniell's work, published by Mr. Headlam in 1846, was much modified by the extensive changes introduced by the English Orders of May 8th, 1845; and the 3d edition by the still more radical changes introduced by the Orders of April, 1850, the Statute of 15 and 16 Vict. chap. 86, and the General Orders afterwards made under the authority of that statute. Of course, the subsequent editions of Daniell are still further removed from the standard adopted by this court in 1842; but as they contain a view of the later decisions bearing upon so much of the old system as remains, they have, on that account, a value of their own, provided one is not misled by the new portions.

Opinion of the court.

purpose; or if he fails to answer after a former plea, demurrer, or answer is overruled or declared insufficient. The 12th Rule in Equity prescribes the time when the subpoena shall be made returnable, and directs that "at the bottom of the subpoena shall be placed a memorandum, that the defendant is to enter his appearance in the suit in the clerk's office on or before the day at which the writ is returnable: otherwise, the bill may be taken *pro confesso*." The 18th Rule requires the defendant to file his plea, demurrer, or answer, (unless he gets an enlargement of the time,) on the rule day next succeeding that of entering his appearance: and in default thereof the plaintiff may, at his election, enter an order (as of course) in the order book, that the bill be taken *pro confesso*; and thereupon the cause shall be proceeded in *ex parte*, and the matter of the bill may be decreed by the court at any time after the expiration of thirty days from the entry of said order, if the same can be done without an answer, and is proper to be decreed; or the plaintiff, if he requires any discovery or answer to enable him to obtain a proper decree, shall be entitled to process of attachment against the defendant to compel an answer, etc. And the 19th Rule declares that the decree rendered upon a bill taken *pro confesso* shall be deemed absolute, unless the court shall at the same term set aside the same, or enlarge the time for filing the answer, upon cause shown upon motion and affidavit of the defendant.

It is thus seen that by our practice, a decree *pro confesso* is not a decree as of course according to the prayer of the bill, nor merely such as the complainant chooses to take it; but that it is made (or should be made) by the court, according to what is proper to be decreed upon the statements of the bill, assumed to be true. This gives it the greater solemnity, and accords with the English practice, as well as that of New York. Chancellor Kent, quoting Lord Eldon, says: "Where the bill is thus taken *pro confesso*, and the cause is set down for hearing, the course (says Lord Eldon,

Opinion of the court.

in *Geary v. Sheridan*, 8 Ves. 192), is for the court to hear the pleadings, and itself to pronounce the decree, and not to permit the plaintiff to take, at his own discretion, such a decree as he could abide by, as in the case of default by the defendant at the hearing." *Rose v. Woodruff*, 4 Johns. Ch. 547, 548. Our rules do not require the cause to be set down for hearing at a regular term, but, after the entry of the order to take the bill *pro confesso*, the 18th Rule declares that thereupon the cause shall be proceeded in *ex parte*, and *the matter of the bill may be decreed by the court* at any time after the expiration of thirty days from the entry of such order, if it can be done without answer, *and is proper to be decreed*. This language shows that the matter of the bill ought at least to be opened and explained to the court when the decree is applied for, so that the court may see that the decree is a proper one. The binding character of the decree, as declared in Rule 19, renders it proper that this degree of precaution should be taken.

We have been more particular in examining this subject because of the attempt made by the defendants, on this appeal, to overthrow the decree by matters outside of the bill, which was regularly taken *pro confesso*. From the authorities cited, and the express language of our own Rules in Equity, it seems clear that the defendants, after the entry of the decree *pro confesso*, and whilst it stood unrevoked, were absolutely barred and precluded from alleging anything in derogation of, or in opposition to, the said decree, and that they are equally barred and precluded from questioning its correctness here on appeal, unless on the face of the bill it appears manifest that it was erroneous and improperly granted. The attempt, on the hearing before the master, to show that the reissued patent was for a different invention from that described in the original patent, or to show that there was such unreasonable delay in applying for it as to render it void under the recent decisions of this court, was entirely inadmissible because repugnant to the

Opinion of the court.

decree. The defendants could not be allowed to question the validity of the patent which the decree had declared valid. The fact that the reissue was applied for and granted fourteen years after the date of the original patent would, undoubtedly, had the cause been defended and the validity of the reissued patent been controverted, have been strongly presumptive of unreasonable delay; but it might possibly have been explained, and the court could not say as matter of law, and certainly, under the decree of the court, the master could not say, that it was unsusceptible of explanation. And on this appeal it is surely irregular to question the allegations of the bill. If anything appears in those allegations themselves going to show that the decree was erroneous, of course it is assignable for error; but any attempt to introduce facts not embraced in those allegations, for the purpose of countervailing the decree, is manifestly improper. The introduction of the original patent, pending the appeal, was clearly irregular.

The appellants have called attention to one matter in the allegations of the bill on which they rely for the purpose of showing that, as matter of law, the reissued patent must be void. It is stated in their 10th assignment of error, as follows:

“10th. For that, on the face of the bill and the patent, the reissued patent in suit was illegally granted, and therefore void, and the court should have so held; and this court is now asked to so hold, because the bill avers that during the fourteen years of the original term of the patent the validity of said letters patent was established in numerous suits in the Circuit Courts of the United States, and that all persons sued took licenses and paid therefor, as well as many others not sued, thereby averring, in substance, that the original letters patent were *valid* and *operative*:

“Wherefore, appellants ask this court to hold that, the original letters patent having been *valid* and *operative*, as averred by complainant, for over fourteen years, no reissue

Opinion of the court.

thereafter could be legally obtained, because *invalidity* or *inoperativeness* are conditions precedent to the grant of a reissue."

The answer to this assignment is obvious. The suits brought on the original patent may have been for infringements committed against particular parts of the invention, or modes of using it and putting it into operation, as to which the specification was clear, full, and sufficient; whilst, at the same time, there may have been certain other parts of the invention, or modes of using it and putting it into operation, as to which the specification was defective or insufficient, and which were not noticed until the application for reissue was made; or, in the original patent the patentee may have claimed as his own invention more than he had a right to claim as new—a mistake which might be corrected at any time. At all events, the court cannot say, as mere matter of law, that this might not have been the case.

We think that the objection to the decree going to the validity of the patent and the whole cause of action cannot be sustained.

We are then brought to the proceedings in taking the account. The errors assigned on this part of the case are based on the exceptions taken to the master's report, which have already been noticed. They resolve themselves into two principal grounds of objection: *First*, that the master allowed the complainant all the profits made by the defendants by the use of the patented machine in folding cloths and strips, as compared with doing the same thing by hand; whereas he should only have allowed the profits of using the complainant's patented machine as compared with a single folder, which the defendants allege was open to the public before their infringement commenced. *Secondly*, that the master, in allowing profits, took no account of the fact that folded strips, such as those used by the defendants, were an article of merchandise, cut and folded by different parties at a charge of only 25 cents for 144 yards, or

Opinion of the court.

about one-sixth of a cent per yard ; whereas the defendants were charged with a profit of one-half of a cent per yard.

As to the first of these objections, it is to be observed, first, that no evidence was produced before the master to show that, during the period of the infringement, there was open to the public the use of any machine for folding a single edge, which was adapted to the work done by the defendants. The only evidence adduced for that purpose was the letters patent granted to S. P. Chapin, February 19, 1856, and the letters patent granted to J. S. McCurdy, dated February 26, 1856. No evidence was introduced to show that the folding-guides described in those patents were adapted to the folding of strips for corsets, which was the work required by the defendants, and for which they used the complainant's invention. On the contrary, it was proved by the positive testimony of the complainant (and not contradicted,) that the Chapin device could not be used for folding strips of materials on one or both edges for use upon corsets, for reasons fully detailed in the testimony ; and that "the McCurdy device is a binder calculated and adapted to fold selvaged edged goods, such as ribbon and braid, and will fold the strip passing through it in the center only," "and cannot be used for folding raw-edged strips of cloth, either on one or both edges." The complainant also testified that there was no other way known to him (and he testified that he had large experience on the subject) to do work like that done by the defendants, except by hand, or in the use of another patent owned by him, namely, the Robjohn patent, dated April 19, 1864 (which was produced in evidence,) consisted of a folding-guide, folding one edge in combination with a device for pressing said fold to an edge, and then passing said folded strip through a narrower folder, folding the other edge, and pressing said fold by a pressing device. No evidence was adduced by the defendants to contradict this testimony.

It is proper to remark here that the affidavits presented

Opinion of the court.

to the master, and those afterwards presented to the court, as grounds of the respective applications to reopen the proofs, cannot be looked into on this hearing. They form no part of the evidence taken before the master on the reference; and no error is assigned (even if error could be assigned) to the refusal of the court to refer the case back to the master for the purpose of taking further testimony.

The second objection to the report is, that the master, in estimating the profits chargeable to the defendants, did not take into account the fact that folded strips, such as those used by the defendants, were an article of merchandise, cut and folded by different parties at a charge of only 25 cents for 144 yards. To this objection it may be observed, that the evidence before the master did not show by what process such folded strips were made, nor whether they were not really made by infringing the complainant's patent. As the proof stood before the master, they must have been made by the use of the complainant's machine, for there was no other known machine by which they could have been made at any such cost. And if made by the use of complainant's machine, the inference must be that the persons making them were infringing the complainant's patent, for they are not named in the list of those to whom the complainant had granted licenses, which list was presented before the master at the defendants' request. If made by such infringement they can hardly be set up against the complainant to reduce the amount of profits made by the defendants. There is something singular about this part of the case. If folded strips, suitable for the defendants' purpose, could have been procured in the market by them at such a low price as is pretended, why did they not procure them in that way after being enjoined against using the complainant's machine, instead of making them by the disadvantageous method of using a single folder and folding one edge at a time? Was it from a knowledge of the fact that the persons who folded such strips were infringing the complain-

Opinion of the court.

ant's patent, and a consequent unwillingness to become further complicated in such infringements? At all events, since the defendants chose to make their own folded strips in their own factory, instead of going outside to purchase them, or have them made by others, they cannot justly complain of being accountable for the profits realized in using the complainant's machine for that purpose. It might have been a better financial operation to have bought of others, or employed others to make the folded strips which they required, just as, in the case of the Cawood Patent, the railroad company would have done better not to have mended the ends of their battered rails, but to have had them cut off; but as they chose to perform the operation they became responsible to the patentee for the advantage derived from using his machine. Cawood Patent, 94 U. S. 710 [11 Am. & Eng. 235.] We do not think that the objection is well taken.

It follows that all the reasons of appeal must be overruled.

No error, or ground of appeal, is assigned upon the refusal of the court below to refer the cause back to the master for the purpose of reopening the proofs, although some observations on that point are submitted in the brief of the appellants. We think that that matter was fairly addressed to the discretion of the court, and cannot properly be made the ground of objection on this appeal. New evidence, discovered after the hearing before the master is closed, may, in proper cases, be ground for a bill of review, on which issue may be joined and evidence adduced by both parties in the usual way. The defendants are not concluded by the refusal of the court, on mere affidavits, to refer the cause back to the master. An examination, however, of the affidavits presented to the court, does not convince us that a further inquiry should have been ordered.

In thus considering the case on its merits, as presented by the evidence taken before the master, his report thereon,

Opinion of the court.

and the exceptions to such report, we have deemed it unnecessary to make any remarks as to the *status* of a defendant before a master on a reference under a decree *pro confesso*. Both parties in this case seem to have taken for granted that the rights of the defendants were the same as if the decree had been made upon answer and proofs. In the English practice, it is true, as it existed at the time of the adoption of our present Rules (in 1842,) the defendant, after a decree *pro confesso* and a reference for an account, was entitled to appear before the master and to have notice of, and take part in, the proceedings, provided he obtained an order of the court for that purpose, which would be granted on terms. 2 Dan. Ch. Pr., 804, 1st ed.; Ditto, 1358, 2d ed. by Perkins; Heyn v. Heyn, Jacob, 49. The former practice in the Court of Chancery of New York was substantially the same. 1 Hoff. Ch. Pr., 520; 1 Barb. Ch. Pr., 479. In New Jersey, except in plain cases of decree for foreclosure of a mortgage (where no reference is required,) the matter is left to the discretion of the court. Sometimes notice is ordered to be given to the defendant to attend before the master, and sometimes not; as it is also in the Chancellor's discretion to order a bill to be taken *pro confesso* for a default, or to order the complainant to take proofs to sustain the allegations of the bill. Nixon's Dig. Art. Chancery, §21; Gen. Ord. Ch. XIV., 3-7; Brundage v. Goodfellow, 4 Halst. Ch. 513.

As we have seen, by our 18th Rule in Equity it is provided that if the defendant make default in not filing his plea, demurrer, or answer in proper time, the plaintiff may, as one alternative, enter an order as of course that the bill be taken *pro confesso*, "*and thereupon the cause shall be proceeded in ex parte.*" The old Rules, adopted in 1822, did not contain this *ex parte* clause; they simply declared that if the defendant failed to appear and file his answer within three months after appearance day, the plaintiff might take the bill for confessed, and that the matter there-

Notes and citations.

of should be decreed accordingly; the decree to be absolute unless cause should be shown at the next term. See Equity Rules VI and X of 1822, 7 Wheat. vii., and Pendleton v. Evans, 4 Wash. C. C. 336; O'Hara v. MacConnell, 93 U. S. 150. Under these rules the English practice was left to govern the subsequent course of proceeding, by which, as we have seen, the defendant might have an order to permit him to appear before the master, and be entitled to notice. Whether under the present rules a different practice was intended to be introduced is a question which it is not necessary to decide in this case.

The decree of the Circuit Court is affirmed.

114 U. S. 120.

Notes:

4. Original patent in evidence on the question of identity with re-issue :

Eureka Co. v. Bailey Co., 11 Wall. 488 [8 Am. & Eng. 280.]

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.]

Russell v. Dodge, 93 U. S. 460 [10 Am. & Eng. 495.]

Smith v. Goodyear D. V. Co., 93 U. S. 486 [11 Am. & Eng. 1.]

Bates v. Coe, 98 U. S. 31 [12 Am. & Eng. 150.]

Ball v. Langles, 102 U. S. 128 [12 Am. & Eng. 508.]

Clark v. Wooster, 119 U. S. 322.

Patent in suit :

No. 21,659. Douglass, A. October 5, 1858. Reissue, No. 5,180. December 10, 1872. Sewing Machine.

OTHER SUITS ON SAME PATENT:

Wooster v. Taylor, 1874. 12 Blatch. 384; 1 Ban. & Ard. 594; 8 O. G. 644.

Notes and citations.

Wooster v. Sidenberg, 1875. 13 Blatch. 88; 2 Ban. & Ard. 91; 10 O. G. 244.

Cited:

IN SUPREME COURT IN :

Dobson v. Bigelow Carpet Co., 1885. 114 U. S. 439; Bk. 29 L. ed. 177.

Clark v. Wooster, 1886. 119 U. S. 322; Bk. 30 L. ed. 392.

Tilghman v. Proctor, 1888. 125 U. S. 136; Bk. 31 L. ed. 664.

IN CIRCUIT COURTS IN :

Wooster v. Thornton, January, 1886. 26 Fed. Rep. 274; 34 O. G. 560.

Partee v. Thomas, April, 1886. 27 Fed. Rep. 429.

Hubel v. Dick, September, 1886. 28 Fed. Rep. 656.

IN TEXT BOOKS :

Walker on Pats., 2d. ed., 1889. p. 169.

Syllabus.

**BENJAMIN BUTTERWORTH, Commissioner of Patents,
APPELLANT, v. SAMUEL HILL ET AL.*****114 U. S. 128-133. Oct. Term, 1884.**

[Bk. 29, L. ed. 119; 31 O. G. 1043.]

Reversing *Vermont Farm Machine Co. v. Marble*, 20 Fed. Rep. 117, and 19 Fed Rep. 307.Argued March 9, 1885. Decided March 30, 1885, *nunc pro tunc* as of March 9, 1885.*Service of process, R. S. sec. 739. Commissioner of Patents—where found. Acceptance of service which is not a consent to jurisdiction.*

1. Section 739, Revised Statutes, which provides (with certain exceptions) that no civil suit shall be brought before either the circuit or district courts of the United States against an inhabitant of the United States, by any original process, in any other district than that of which he is an inhabitant, or in which he may be found at the time of serving the writ, applies to suits brought under sec. 4915 R. S. relating to a bill in equity to obtain a patent on the refusal of the application either by the Commissioner of Patents or by the Supreme Court of the District of Columbia, on appeal from the Commissioner. (p. 59.)
2. A bill in equity implies a suit in equity with process and parties, and a bill brought under section 4915, Revised Statutes, is no exception to this rule. (p. 59.)
3. In his official capacity the Commissioner of Patents is an inhabitant of Washington, in the District of Columbia. (p. 59.)
4. The Commissioner of Patents, by accepting services of a process issued under a bill brought under section 4915, Revised Statutes, in the District of Vermont, and accompanying such acceptance with a letter declining to appear in defence of the suit, does not consent to the jurisdiction of the court, and, therefore, the court was without authority to proceed and enter the decree which has been appealed from. (p. 60.)

*See Explanation of Notes, page III.

Argument of counsel.

Appeal from the Circuit Court of the United States for the District of Vermont.

The history and facts of the case appear in the opinion of the court.

Messrs. S. F. Phillips, Solicitor-General, and F. I. Brown, for appellant:

Assuming that the Commissioner is a party, and that the present appeal has been properly taken, it is submitted that the action of the court below in taking jurisdiction of the present case, being an application in equity for letters patent under section 4915, was error, for the jurisdiction conferred by section 4915 is conferred upon the court of equity for the District of Columbia only, and so the court below was without jurisdiction.

It appears that the Supreme Court of the District of Columbia have the powers of any circuit court. Indeed I may say they have the jurisdiction of causes of greater national interest than any other court of original jurisdiction in the land. Yet we look in vain for any distrust manifested by the legislature of their ability to administer justice as accurately and impartially as any other original court of the country. They are empowered by law to try causes relating to the infringement of patents, trade-marks, &c., and the only review of their decision on these matters which can be had is through the Supreme Court of the United States, the head of the entire Federal judiciary. And yet it is urged that section 4915, R. S., contemplates the anomaly of giving the power of a review of the decision of the Supreme Court of the District to some other circuit. Why should Congress single out the particular class of cases now under discussion for revision by some other court? Why should Congress select the circuit court denominated the Supreme Court of the District of Columbia, and say to them alone that their decisions shall be reviewable by any court of equal rank in the United States? Is it not highly improbable that sec. 4915, R. S., contemplates any such thing?

Argument of counsel.

When analyzed in this manner, it will be seen that there is not inconsistency in construing section 4915, so as to confine the jurisdiction of bills in equity, in which the Commissioner of Patents is made a party, to the Supreme Court of the District of Columbia.

If a court other than the Supreme Court of the District should take jurisdiction in a suit against the Commissioner of Patents, and should enter a decree against him, how could such a decree be enforced? The ordinary way of enforcing a decree is by a mandamus, but the Supreme Court of the United States have repeatedly held that the circuit courts out of the District of Columbia, have no authority to issue a mandamus to an officer of the United States commanding him to do a ministerial act. See *Kendall v. United States*, 12 Pet. 525; *Wood v. McIntyre*, 7 Cranch, 504; *McClung v. Silliman*, 6 Wheat. 598. And it is not to be presumed that a court will take jurisdiction of a case unless it can execute its judgment.

The construction of the statutes now urged upon this court has received the judicial sanction of the only tribunal before whom the point was ever distinctly raised prior to this case, and such tribunal, after full argument by able counsel on both sides, delivered a careful and elaborate opinion against its own jurisdiction. *Prentiss v. Ellsworth*, *Mirror of Pat. Off. for 1846*, p. 35; 2 Whart. Dig. 365.

This decision of Judge Randall is the more important because it was rendered shortly after the passage of the act corresponding with the present section 4915, when the courts might more readily ascertain the meaning of the legislature.

The following list of cases comprises, I think, all decided under 4915 and analogous sections: *Prentiss v. Ellsworth*, *Mir. of Pat. Off. 1846*, p. 35; republished in 27 O. G. 623; *Ex parte Greely*, 6 Fish. 575; *Atkinson v. Boardman*, *Laws Dig.* 666; *Union Paper Collar Co. v. Crane*, 6 O. G. 801; *Ellithorpe v. Robertson*, 2 Fish. 83; *Runstettler v. Ackinson & Marble*, 23 O. G. 940; *Whipple v. Miner*, 23 O. G.

Argument of counsel.

2236 ; Damon v. Eastwick, 22 O. G. 1709 ; John J. Squires, 12 O. G. 1025 ; Butler v. Shaw [21 Fed. Rep. 321,] unreported ; Bunker & Briesdorf v. Butterworth, unreported.

Section 780, Revised Statutes, relating to the D. C. post roads and public treaties, provides: "The Supreme Court sitting in *banc* shall have jurisdiction of and shall hear and determine *all* appeals from the decision of the Commissioner of Patents in accordance with the provision of sec. 4911 to sec. 4915 *inclusive*, of chapter one, title LX of the Revised Statutes, 'patents, trade-marks, and copyrights.' "

Now it will be remembered that sec. 4915 is the one giving the remedy by bill in equity, hence by the section last quoted the suit instituted by such a bill (at least as far as it calls for a review of the decision of the Commissioner of Patents) must be heard and determined by the Supreme Court of the District of Columbia, sitting in *banc*. This section thus by express terms withholds jurisdiction in cases of this character from all other courts than the Supreme Court of the District of Columbia.

*Messrs. Wm. Edgar Simonds and Kittredge Haskins,
for appellees :*

In his brief used in the court below, the Commissioner says : "There cannot be a reasonable doubt of the sole jurisdiction of the Supreme Court of the District of Columbia in suits of the character of the one at bar." This broad position of the Commissioner of Patents is disproved of very briefly—for it is utterly untenable—by pointing to the following cases: Ellithorpe v. Robertson, 2 Fish. 83 ; Whipple v. Miner, 15 Fed. Rep. 117 ; John F. Squire's Case, 3 Ban. & Ard. 133 ; Butler v. Shaw, 21 Fed. Rep. 321.

The Commissioner's strongest position, allowing us to state it, is that while the regular circuit courts have jurisdiction under sec. 4915, where there is an "opposing party," a regular circuit court cannot take jurisdiction where there is no opposing party until after an *appeal* has been taken from the Commissioner of Patents to the Supreme Court of

Argument of counsel.

the District of Columbia. This is unquestionably the real question of the case—so far as the question of jurisdiction is concerned.

If a petition is brought to the Supreme Court of the District of Columbia, under sec. 4915, the decision of that court is not reviewable by any circuit court of the United States; it is only reviewable by the Supreme Court of the United States. In any case which comes to the Supreme Court of the District of Columbia from the Patent Office, it is only where an *ex parte* application for a patent is refused “by the Supreme Court of the District of Columbia upon *appeal* from the Commissioner,” that the applicant can proceed under section 4915, in any court. The two cases are entirely different cases. “Upon *appeal* from the Commissioner” the Supreme Court of the District of Columbia can consider only that evidence which was before the Commissioner. In proceeding under sec. 4915 the proceeding is *de novo*; any court proceeding under this section proceeds as a court of original and not appellate jurisdiction. *Butler v. Shaw, supra*; *Walker on Pats.* 134.

The Commissioner has fallen into mistake by supposing or assuming that under section 4915 the Commissioner can be made to produce the models and papers of the Patent Office in the different circuit courts of the United States. No such thing can be done. It is incumbent upon the petitioner proceeding under sec. 4915, in any court, to support the allegation of his petition by producing in court a certified copy of the record in the Patent Office appurtenant to the application in question.

Appellee's answer to the point that an appeal under sec. 4915 must necessarily be brought in the district of which the Commissioner is an inhabitant, because otherwise service of process cannot be made on the Commissioner is that such a view of sec. 4915 is a narrow and mistaken view.

The proceeding contemplated by sec. 4915 is not a suit *against* the Commissioner of Patents. The service of a copy of the *bill* upon the Commissioner as directed in sec.

Argument of counsel.

4915, is not the bringing of a suit against the Commissioner, not the notice of the beginning of an equity suit which the statutes regulating that matter call for. When an equity suit is begun against a party, a *subpœna* issues from the court and is served upon the defendant. The service of a copy of the *bill* upon the Commissioner, called for by sec. 4915, is not that thing at all; it simply informs the Commissioner of precisely the question which the applicant has brought to the court, and doubtless it is proper for the Commissioner to appear and defend in behalf of the government, if some unusual and extraordinary question arises which in his judgment warrants such a step. If the statute had meant to say that the legal service of process must be made upon the Commissioner it would have used the ordinary language indicating such a thing, and in mentioning the precise paper to be served, it would have mentioned the proper paper, the *subpœna*, and not a copy of the *bill*.

The *terms* of the statute clearly permit the applicant to go from the Commissioner to a regular circuit court, for the statute says: "Whenever a patent on application is refused * * * by the Commissioner of Patents * * * the applicant may have remedy by bill in equity, &c."

The statute is clearly remedial in its nature, and on settled principles must have a liberal construction.

The text-writers, so far as they touch this question, agree that the applicant may go from the Commissioner's rejection to a circuit court under sec. 4915.

To hold that an applicant may not go from the rejection of the Commissioner to a regular circuit court under sec. 4915 without first taking an appeal to the Supreme Court of the District of Columbia, tends to compel useless litigation. By the time an application has been decided by the Commissioner of Patents the applicant will generally find that it is incumbent on him to introduce new facts in evidence, if he would further prosecute his application. This he would naturally do by proceeding under sec. 4915, and to hold that he cannot, at this point, proceed under that sec-

Opinion of the court.

tion, is to compel him to take upon himself the burden and expense of a useless litigation in the Supreme Court of the District of Columbia simply to reach the point where he may begin proceeding under sec. 4915.

Mr. Chief Justice WAITE delivered the opinion of the court :

This is an appeal from a decree on a bill in equity filed in the Circuit Court of the United States for the District of Vermont against the Commissioner of Patents, under section 4915 of the Revised Statutes. That section is as follows :

“Section 4915. Whenever a patent on application is refused, either by the Commissioner of Patents or by the Supreme Court of the District of Columbia upon appeal from the Commissioner, the applicant may have remedy by bill in equity ; and the court having cognizance thereof, on notice to adverse parties and other due proceedings had, may adjudge that such applicant is entitled, according to law, to receive a patent for his invention as specified in his claim, or for any part thereof, as the facts in the case may appear. And such adjudication, if it be in favor of the right of the applicant, shall authorize the Commissioner to issue such patent on the applicant filing in the Patent Office a copy of the adjudication, and otherwise complying with the requirements of law. In all cases where there is no opposing party, a copy of the bill shall be served on the Commissioner ; and all the expenses of the proceeding shall be paid by the applicant, whether the final decision is in his favor or not.”

On filing of the bill, a subpoena was issued commanding the “Commissioner of Patents of the United States of America” to appear before the court in Vermont and answer. On the 18th of October, 1883, the Commissioner made the following indorsement on the writ :

“WASHINGTON, D. C., *October 18th, 1883.*

I hereby accept service of the within subpoena, to have

Opinion of the court.

the same effect as if duly served on me by a proper officer, and I do hereby acknowledge the receipt of a copy thereof.

E. M. MARBLE,
Com'r of Patents.

(Office of Com'r of Patents. Received Oct. 18, 1883.)

And afterwards, and on said 23d day of October, A. D. 1883, a letter from the Commissioner of Patents was filed, which said letter is in the words and figures following :

“ DEPARTMENT OF THE INTERIOR,
UNITED STATES PATENT OFFICE,
WASHINGTON, D. C., *October 18, 1883.* } ”

SIR: I am in receipt of your letter of the 16th instant, enclosing copy of a bill of complaint entitled Hill & Prentice *et al. v.* The Commissioner of Patents of the United States of America, in the United States Circuit Court for the District of Vermont, praying that said court direct the Commissioner of Patents to issue a patent to the assignees of Hill & Prentice for the invention disclosed and claimed in their application filed in this office March 30, 1880, for an improvement in milk coolers ; also a subpoena to appear and answer to said bill on the 5th proximo and a certified copy of said subpoena. I herewith return the subpoena, service accepted, and have to inform you that I shall not appear in defence in said bill.

Very respectfully,

E. M. MARBLE, *Commissioner.*

Mr. W. E. SIMONDS, *Hartford, Conn.*”

No other service of process was made on the Commissioner, and he made no other appearance in the cause than such as may be implied from his acceptance of service and his letter as above. In due course of proceeding a decree was entered adjudging that “ Samuel Hill and Benjamin B. Prentice, as inventors, and the Vermont Machine Company, as assignee of said inventors, are entitled to have issued to them letters patent * * * as prayed for in the pe-

Opinion of the court.

tition and bill of complaint.” No one was made defendant to the bill except the Commissioner of Patents, and Hill, Prentice, and the Machine Company, the complainants, were all citizens of Vermont. Benjamin Butterworth, the Commissioner of Patents, took this appeal, and the only question presented under it for our consideration is whether the Circuit Court of the District of Vermont had jurisdiction so as to bind the Commissioner by the decree which was rendered.

It is contended that the Supreme Court of the District of Columbia has exclusive jurisdiction of suits against the Commissioner brought under this section of the Revised Statutes. In the view we take of this case, however, that question need not be decided. By section 739 of the Revised Statutes, as well as by the Act of March 3, 1875, c. 137, sec. 1, 18 Stat. at L. 470, it is provided in substance that, with some exceptions which do not apply to this case, “No civil suit shall be brought before either of said courts (the Circuit or District Courts of the United States) against an inhabitant of the United States, by any original process, in any other district than that of which he is an inhabitant, or in which he may be found at the time of serving the writ.” We entertain no doubt that this statute applies to suits brought under section 4915. The applicant is to have his remedy under that section by bill in equity, and by the *adjudication* “of the court having cognizance thereof, on notice to adverse parties and other due proceedings had.” A bill in equity implies a suit in equity, with process and parties. The prayer for process is one of the component parts of the structure of a bill, and its purpose is to compel the defendant to appear and abide the determination of the court on the subject-matter of the proceeding. Story’s Eq. Pl., sec. 44.

The bill in this case was filed against the Commissioner alone, and it does not appear that he was an inhabitant of the District of Vermont. The Patent Office is in the De-

Opinion of the court.

partment of the Interior (Rev. Stat. sec. 475,) which is one of the Executive Departments of the Government at the seat of government in the District of Columbia. Rev. Stat. sec. 437. The Commissioner of Patents is by law located in the Patent Office. Rev. Stat., sec. 476. His official residence is therefore at Washington, in the District of Columbia.

The subpoena in this case was delivered to him in the District of Columbia, and his acceptance of service was made there. That is apparent from the face of his indorsement and the letter which was written afterwards, and filed in the cause, undoubtedly as proof of a delivery of a copy of the bill which the law required should be served on him. Both the indorsement and the letter purport to have been written at Washington, and the letter in the Patent Office. Unless, therefore, the acceptance of service as indorsed on the writ is to be treated as a voluntary appearance by the Commissioner in the court in Vermont, without objection to the jurisdiction, the case stands as it would if the process had been actually served on him in the District of Columbia by some competent officer. The Circuit Court was of opinion that by his acceptance of service the Commissioner waived all objection to the jurisdiction and consented to be sued away from the seat of government and from his residence. In this we think there was error. The fair meaning of the indorsement on the writ is that the Commissioner admits the service with the same effect it would have if made by an officer in the District of Columbia. No appearance is thereby entered in the cause. Service of the subpoena in the District is acknowledged, but nothing more. In the letter which followed the indorsement of service, both counsel and the court were informed that the Commissioner declined to appear. The parties proceeded, therefore, at their own risk and without the consent of the defendant to the jurisdiction of the court. Such being the case, we are of opinion that the court was without jurisdiction and had no authority to enter the decree which has

Notes and citations.

been appealed from. The Act of Congress exempts a defendant from suit in any district of which he is not an inhabitant, or in which he is not found at the time of the service of the writ. It is an exemption which he may waive, but unless waived he need not answer and will not be bound by anything which may be done against him in his absence. What is here said of course does not apply to cases where the suit is brought and service is made under sections 736, 737, and 738 of the Revised Statutes.

Without considering any of the other questions which have been presented in the argument, or which might be suggested under the statute, *we reverse the decree of the Circuit Court and remand the cause, with instructions to dismiss the bill without prejudice for want of jurisdiction.*

114 U. S. 133.

Cited:

IN CIRCUIT COURTS IN :

Romaine v. Union Ins. Co., August, 1886. 28 Fed. Rep. 625.
United States v. Am. Bell Tel. Co., November, 1886. 29 Fed. Rep. 17.
Holmes Electric Protective Co. v. Metropolitan Burglar Alarm Co., July, 1887. 31 Fed. Rep. 562.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. p. 274.
Walker on Pats., 2d ed., 1889. p. 99.

Syllabus.

JOHN STEPHENSON, APPELLANT, v. BROOKLYN
CROSS-TOWN RAILROAD COMPANY.*

114 U. S. 149-158. Oct. Term, 1884.

[Bk. 29, L. ed. 58; 31 O. G. 263.]

Affirming *Ibid*, 19 Blatch. 473.

Argued March 11, 1885. Decided March 23, 1885.

*Particular patents construed. Want of invention. Aggregation.
Combination. Patentability.*

1. Letters patent, No. 142,810, J. A. O'Haire, September 16, 1873, Street-Car, for the combination of a rod, crank, or lever, and guiding-frame secured to the front door of a street car, and combined with an operating-lever which enables the driver to open the rear door, construed and *held*, that there was no evidence that O'Haire made his invention prior to date of the application, and as the state of the art at that time showed that neither the separate elements of the devices nor the combination were new, there was no patentable invention in the contrivance described in the patent, and hence no infringement. (p. 83.)
2. Letters patent, No. 161,568, J. Stephenson, March 30, 1875, Signaling Drivers on Street-Cars, for two bell-cords, provided with a system of pull-straps, passing along the sides of a street-car, within convenient reach of the seated passengers for signaling purposes, construed and *held*, that as the evidence shows that long prior to the application such signaling appliances had been attached to the middle of street-car ceilings, there was no invention in changing them to the sides of the car, and hence the patent was void. (p. 86.)
3. Letters patent, No. 167,585, J. Stephenson, September 3, 1875, Street-Cars, for a combination for a bonnet in which was fixed a mirror, and an opening in the front door of a street-car, by means of which the driver can see what is transpiring within the car without turning his head, construed and *held*, that as

* See Explanation of Notes, page III.

Statement of the case.

each element was old, and as neither element performed any new office or imparted any new power to the other, and as all combined did not produce any new result or any old result more cheaply or otherwise more advantageously, this was a mere aggregation, and not a patentable combination. (p. 88.)

4. A combination is patentable only when the several elements of which it is composed produce by their joint action a new and useful result, or an old result in a cheaper or otherwise more advantageous way. (p. 89.)

[Citations in the opinion of the court:]

- Smith *v.* Nichols, 21 Wall. 112 [9 Am. & Eng. 425.] p. 85.
 Penn. R. R. Co. *v.* Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148.] p. 86.
 Vinton *v.* Hamilton, 104 U. S. 485 [13 Am. & Eng. 394.] p. 86.
 Blake *v.* San Francisco, 113 U. S. 679 [15 Am. & Eng. 585.] p. 86.
 Hotchkiss *v.* Greenwood, 11 How. 248 [5 Am. & Eng. 240.] p. 88.
 Stimpson *v.* Woodman, 10 Wall. 117 [8 Am. & Eng. 221.] p. 88.
 Atlantic Works *v.* Brady, 107 U. S. 192 [14 Am. & Eng. 380.] p. 88.
 Slawson *v.* Railroad Co., 107 U. S. 649 [14 Am. & Eng. 475.] p. 88.
 King *v.* Gallun, 109 U. S. 199 [14 Am. & Eng. 559.] p. 88.
 Phillips *v.* Detroit, 111 U. S. 604 [15 Am. & Eng. 269.] p. 88.
 Hailes *v.* Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.] p. 90.
 Reckendorfer *v.* Faber, 92 U. S. 347 [10 Am. & Eng. 373.] p. 90.
 Pickering *v.* McCullough, 104 U. S. 310 [13 Am. & Eng. 238.] p. 90.

Appeal from the Circuit Court of the United States for the Eastern District of New York.

The history and facts of the case appear in the opinion of the court and in the following

Statement by Mr. Justice Woods:

John Stephenson, the appellant, was the plaintiff in the Circuit Court. He brought his bill to restrain the infringement by the Brooklyn Cross-Town Railroad Company, the appellee, of three letters patent. The first was a patent dated September 16, 1873, granted to John A. O'Haire and W. A. Jones, the inventor, for "an improvement in operating car doors." The second, dated March 30, 1875, was granted to the appellant "for an improvement in signaling devices for street cars." The third, dated September 7,

Statement of the case.

1875, was also granted to the appellant for an "improvement in street cars," consisting in placing a mirror in the hood of an ordinary street car to enable the driver to see what was occurring in and behind the car.

The bill charged an infringement of each of these patents by the appellee in all of its cars.

The answer of the appellee denied infringement of any of the patents sued on; averred that all had been anticipated by specified American and foreign patents and by certain persons in this country, naming them; that none of the devices were patentable, and that the devices described in the second and third patents were in public use and on sale for more than two years prior to the application for letters patent therefor respectively.

Upon final hearing the Circuit Court dismissed the bill, and the plaintiff appealed.

The drawings and specifications of the letters patent referred to in the opinion of the court are as follows:

JOHN A. O'HAIRE, OF WEST TROY, NEW YORK, AS-
SIGNOR OF ONE-HALF TO W. A. JONES,
OF SAME PLACE.

IMPROVEMENT IN OPERATING CAR-DOORS.

Specification forming part of Letters Patent, No. 142,810,
dated September 16, 1873; application filed June 27, 1873.

To all whom it may concern:

Be it known, that I, Jno. A. O'Haire, of West Troy, in the county of Albany and State of New York, have invented certain new and useful Improvements in Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it,

Statement of the case.

reference being had to the accompanying drawings, which form part of this specification.

The nature of my invention relates to an improvement in devices for opening the doors of cars; and it consists in a rod passing from the front to the rear of the car through a hollow bar, from which the hand-straps are suspended, and which has a crank or lever secured to each end. The front lever is in easy reach of the driver, while the rear one carries a roller, which works up and down in a rectangular frame secured to the rear edge of the door, and through which the door is moved back and forth. The driver, by moving the lever, can open or close the door at will.

Figure 1 represents a cross-section of a car to which my invention is applied. Fig. 2 is a detail view of the same.

a represents the frame of an ordinary street-car, provided with the door *c*, which is supported upon and moves back and forth upon suitable pulleys and ways arranged in any desired manner. Passing through the hollow bar *e*, from which the hand-straps are suspended, is a rod or bar, *i*, which has a lever or crank upon its front end within easy reach of the driver. Upon its rear end is a similar lever or crank, 3, carrying the roller 5, which works up and down in the rectangular guiding-frame 6, secured to the rear edge of the door, and through which the door is opened and closed. The driver by a slight push upon the front lever, secured to the front end of the rod *i*, can open the door *c*, or, by a pull toward him, can close it, as shown in dotted lines, without moving off his seat.

By this simple arrangement of devices I entirely dispense with the use of cords, which are always more or less liable to break, and all weights, pulleys, and other devices, which are not only costly, but more or less liable to get out of repair.

I am aware, that it is not new to operate the door from the front platform of the car, as this has heretofore been accomplished by means of an endless cord, which passes through the rods to which the holding-straps are secured, and I therefore disclaim such invention.

J. A. O'HAIRE.
Operating Car-Doors.

No. 142,810.

Patented September 16, 1873.

Fig. 1.

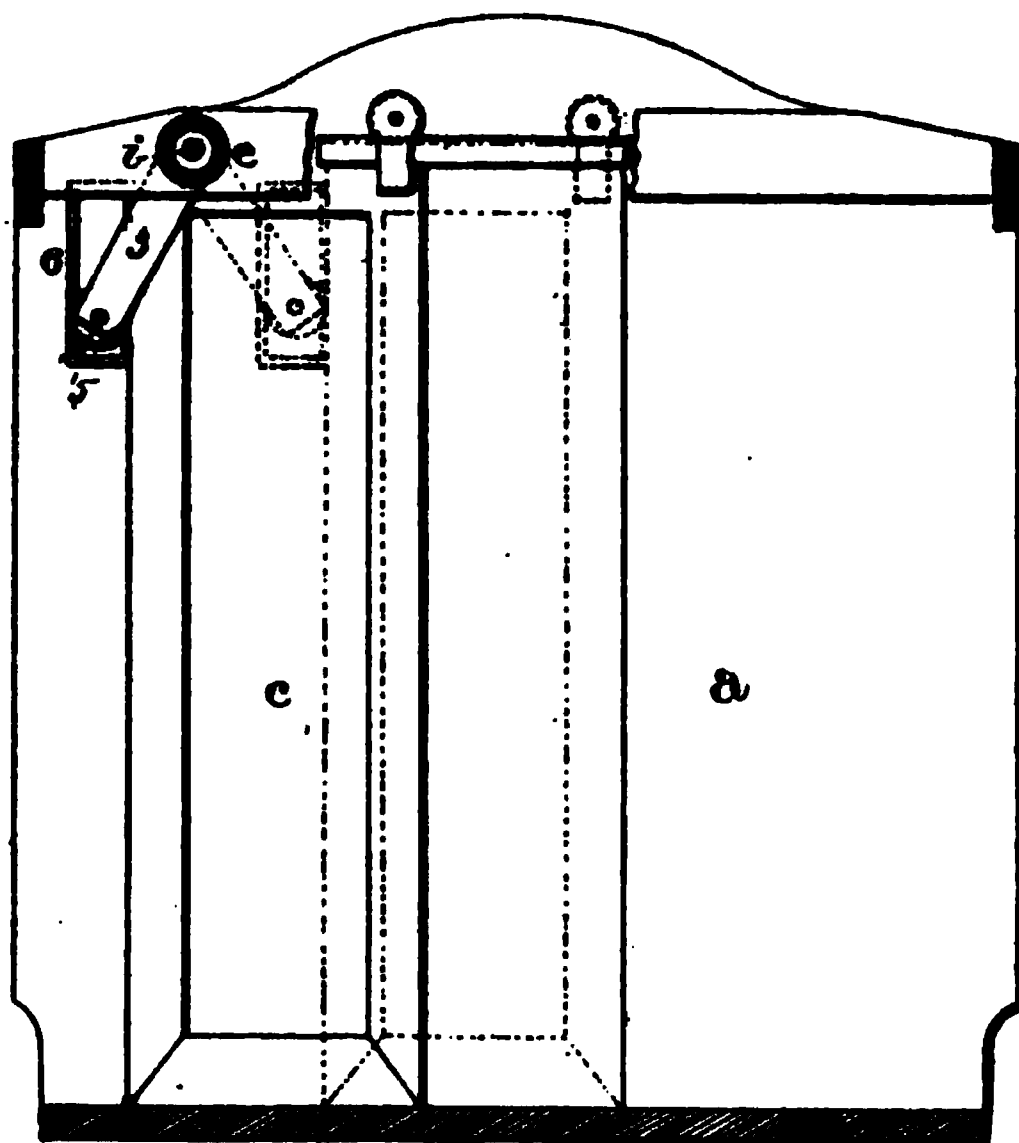
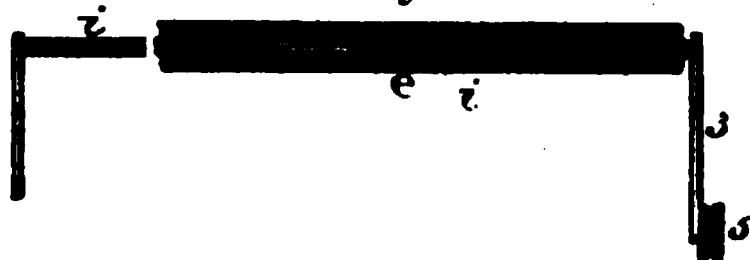


Fig 2.



WILCOBCE
N. J. Johnson
H. F. Hendig.

INVENTOR.
Jno A O'Hare
per
F A. Lehmann, atty.

Statement of the case.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The rod *i*, crank or lever 3, and guiding-frame 6, secured to the door, and combined with an operating-lever for the driver, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand and seal this 24th day of June, 1873.

JOHN A. O'HAIRE. [L. S.]

Witnesses :

CHARLES H. FORT,
JOHN HAMIL.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN SIGNALING DEVICES FOR STREET-CARS.

Specification forming part of Letters Patent, No. 161,568, dated March 30, 1875 ; application filed March 2, 1875.

CASE G'.

To all whom it may concern :

Be it known that I, John Stephenson, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Street-Cars, and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a vertical longitudinal section of a car-body having my improvement applied thereto, and Fig. 2 a vertical transverse section of same as taken through the line *x x* of Fig. 1.

The prevalence of street-cars managed by the driver, with-

Statement of the case.

out the aid of a conductor, makes it necessary that every possible facility should be provided for him as well as the passengers.

The ordinary street-car has a signal-bell located at each end, with a bell-strap attached thereto, which runs centrally along the ridge or highest part of the ceiling. This strap, as thus located, is inaccessible to many passengers.

My improvement is intended to remedy this trouble, and consists in a new combination and arrangement with a street-car of bells or gongs and of the cords or straps which operate them, whereby passengers can, without rising from their seats, signal to the driver. This is of primary importance to invalids, ladies, and children, and that more especially when the car is crowded.

To enable others skilled in the art to make, construct, and use my invention, I will now proceed to describe it in detail, omitting a description of such parts of a street-car as is non-essential to a full understanding of the improvement.

My improvement is applicable to any kind of street-car, whether operated by a driver alone, or by a driver and conductor. In this case it is represented in connection with a street-car intended to be operated by the driver alone, that is to say, with a car having a single driver's platform, A, and to which access is had by the passengers through an entrance or door, B, arranged in the rear, by a platform-step, C, leading thereto. At each end of the car is arranged a bonnet or hood for protection from the weather, and which may or may not be made independent of and detachable from the main body of the car. To the frame or rafters of the front bonnet D (the one over the driver's platform) is arranged a bell or gong, *a*, at each side or angle of the front end of the car, to the lever end of the hammer of each of which is attached one end of a bell-cord, *b*, the other end, *c*, of each of which is secured to the inner side of the rear wall of the car, the cords being respectively led along the lower margin of the ceiling, one on each side, as shown in Fig. 2. From these bell-cords *b*, pendants or "pulls" *f*, are suspended at

J. STEPHENSON.

Signaling-Device for Street-Cars.

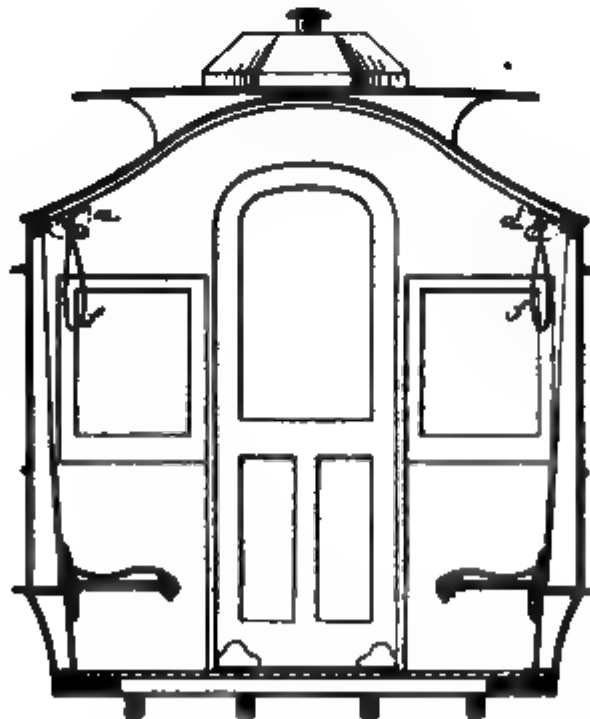
No. 161,568.

Patented March 30, 1875.

FIG. 1

21

FIG. II.



WITNESSES.

W. A. Grant
J. P. Knight

INVENTOR:

John Stephenson
per S. Hannay
attorney.

Statement of the case.

suitable intervals apart and within easy reach of the seated passengers, so that they, without rising from their seats, can, at will, communicate with the driver.

Where the car is provided with two driver's platforms, one at each end of the car, then the bonnet of each end may, if desired, be provided at its sides with a bell or gong connected with a bell-strap and pulls, arranged in the manner described; but it is not considered absolutely necessary to do so, as the gongs could be heard by him sufficiently distinctly from the rear, and thus serve the purpose of a signal without arranging a double set for that purpose. Where, however, such is desired, the corresponding ends of the bell-cord may be attached to the respective bells in the usual way. The cord being made somewhat longer than would be required for a single bell, a couple of rings may then be fastened to the upper side of the bell-cord, one near each end of the car, immediately adjoining the opening in the end of the car, through which the cord is made to pass. A hook is then secured to the roof or to the ends of the car, to which the strap may be hooked, according to the end of the car which the driver is using. As, for example, the driver being on his platform, the bell-cord is hooked to that end of the car, which at that time, forms the rear, and when he changes his platform, that end is then unhooked and the other end hooked up, and so on. This arrangement prevents the use of two gongs at one and the same time for making a single signal, but little trouble being exercised in making the change. Such plan is illustrated in dotted lines in Fig. 1, the cord being shown as looped up.

Again, a single bell or gong may be used with two independent hammers, to each of which the end of one of the two cords may be respectively secured.

Having thus described my invention, what I claim as new is—

In a street-car, two bell-cords, each provided with a system of pull-straps, and arranged in such manner as to pass along the lower margin of the roof on the opposite sides of

Statement of the case.

the car, and connect directly with a signal bell or gong attached to the outside of the driver's end of the car, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own, I affix my signature in the presence of two witnesses.

JOHN STEPHENSON.

Witnesses:

WM. JOHN WALKER,
JOHN SMITH.

JOHN STEPHENSON, OF NEW YORK, N. Y.

IMPROVEMENT IN STREET-CARS.

Specification forming part of Letters Patent, No. 167,585, dated September 7, 1875; application filed August 7, 1874.

To all whom it may concern:

Be it known that I, John Stephenson, of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Street-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, in which—

Figure 1 represents a side elevation of one of my improved cars, portions of the side and roof being broken off, and other parts shown in section to illustrate the details of the mechanism through which the driver operates the entrance-door. Fig. 2 represents a plan, portions of the roof and hoods being broken off. Fig. 3 represents a vertical transverse section of a portion of the upper part of the car, looking toward the front.

In running street-cars it has been found to be a serious source of trouble to have the driver continually turning

J. STEPHENSON.
Street-Car.

No. 167,585.

FIG. 1.

Patented Sept. 7, 1875.

FIG. II.

FIG. III.

WITNESSES,

D. C. Stuart
J. H. Knight



INVENTOR.

John Stephenson.
per D. H. Harnay
Attorney.

Statement of the case.

around to ascertain when it is necessary to stop to permit passengers to enter or leave the car, as such constantly takes away his attention from his horses, and that frequently when it is most required.

To obviate this trouble is the object of my present improvement. My invention, for this purpose, consists in combining a mirror with the front hood of the car, it being so arranged in connection therewith, and with an opening in the front end of the car, as to give the driver a clear view of the inside of the car and through the entrance-door of the latter, and that without the necessity of his having to turn around for such purposes, thereby enabling him, without withdrawing his attention from the horses, to see when it is necessary to stop, either to receive a passenger or to allow one to get out.

To enable others skilled in the art to make, construct, and use my improvement, I will now proceed to describe it in detail.

A suitable car having my improvement applied thereto is shown in the drawing, it, in this case, being applied to a car in which the entrance-door A, through suitable devices for the purpose, is placed under the immediate and sole control of the driver, and that in such manner as to enable him to open or close it at will; but this feature is not absolutely essential, as my improvement is equally applicable to a car in which the passengers themselves open or close the door, according as they desire to get in or out of the car, and over which the driver has no immediate control. But practical tests have demonstrated the desirableness of placing the door under the immediate control of the driver, that he may open and close it at will, to the exclusion of drunken and other disorderly persons.

Suitable devices for this purpose are shown in the drawing, consisting of an endless cord, C, passing around suitable pulleys D, the two ends of which are firmly attached to the entrance-door A, and which, for this purpose, is arranged to slide back and forth, according to the direction in which

Statement of the case.

the cord is pulled. In most other respects the car may be of the usual construction, with the exception of the front bonnet or hood E, which, on its under and front side, at or near the middle, is provided with an angular block, *a*, to the front side of which the mirror *b* is secured in any suitable manner. This mirror is set at a small angle to a horizontal plane, so that its upper edge will project rearwardly beyond its lower edge, it being placed at such angle as will enable it, through the opening F in the front end of the car, to give the best view of the interior of the car, and through the glass windows of the entrance-door A.

If necessary or desirable, mirror *b* may, through a suitable frame, be so attached to the hood as to be adjusted to any required angle and height from the ground.

The opening F in the front end of the car it is deemed best to arrange in the front or driver's door B, as being more central and giving a better view of the inside of the car and of the passengers, and, if desired, may be left open in summer and covered with glass in winter.

The mirror *b*, thus combined with the bonnet or hood, and arranged with respect to the opening F in the front end of the car, will enable the driver to see when it is necessary for him to open or close the door for the ingress or egress of passengers, and is at the same time entirely out of the way of the driver, and of danger of breakage.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination of a bonnet, E, provided with a mirror, *b*, with an opening, or an opening covered by a transparent medium, F, in the front end of a street-car, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

JOHN STEPHENSON.

Witnesses:

WILLIAM J. WALKER,
JOHN SMITH.

Argument of counsel.

Messrs. William Allen Butler, Benjamin F. Thurston, George Gifford, and Philip J. O'Reilly, for appellant:

Infringement by the appellee of the O'Haire patent is fully proved. D. R. Hart, an expert car builder, testifies that he examined the cars used by the appellee, and found that they employed the invention of O'Haire, and that the lowermost door-opening device represented by said model shows the device so employed by the appellee. Mr. Brevoort, an expert witness called for appellant, testifies that the appellee's door-closing device is substantially like that described and specified in the O'Haire patent, and gives his reasons at length.

It is clear that the O'Haire invention is not described in the English patent of Johnson as the defendants claim. They contend that Johnson describes mechanism for opening and closing car doors consisting of the following elements: A lever is attached to a shaft running the length of the car; to the bottom of the door is fixed a rack into which a toothed wheel engages; and that by moving the lever the door is opened and closed. Further, that though this mechanism is not the same as the O'Haire, yet it is the mere equivalent of and substitute for it. Both of these positions are denied by appellant, and it is confidently held on his part that they cannot be maintained.

The law, both here and in England, is quite stringent in holding that a prior patent or publication, in order to defeat a subsequent patent, must be so full, clear, and exact as to describe not only a practical device, but also the invention covered by the subsequent patent, or, in other words, that the latter invention may be read out of the prior patent or publication.

This court in *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290,] says: "Mere vague and general representations will not support such a defence, for the knowledge supposed to be derived from the publication must be sufficient to enable those skilled in the art to understand the nature and operation of the invention and to carry it into

Argument of counsel.

practical use." See also, *The Cawood Patent*, 94 U. S. 695 [11 Am. & Eng. 235 ;] *Hood v. Boston Car Spring Co.*, 21 Fed. Rep. 67 ; *Betts v. Menzies*, 10 H. of L. Cases, 117 ; *Downton v. Yaeger Milling Co.*, 118 U. S. 466 [14 Am. & Eng. 513 ;] *Carr v. Rice*, 1 Fish. 198 ; *Reeves v. Keystone Co.*, 5 Fish. 456 ; *Roberts v. Dickey*, 4 Fish. 532 ; *Powder Co. v. Parker*, 16 Blatch. 281.

The defendants contend that substantially the O'Haire invention is found in the Kidder patent, No. 91,026. We submit that this contention is not only erroneous, but that the Kidder patent is for a device substantially different from the O'Haire in object, construction, mode of operation and result produced, and that it would have required the exercise of invention to pass from the Kidder to the O'Haire device.

The principle that the adaptation and reconstruction of old devices or machinery for other ends are patentable, has been steadily enforced both by this court and the circuit courts. *Le Roy v. Tatham*, 22 How. 139 [7 Am. & Eng. 29 ;] *Tucker v. Spaulding*, 13 Wall. 453 [8 Am. & Eng. 474 ;] *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290 ;] *Pitts v. Whitman*, 2 Story, 619 ; *Parker v. Stiles*, 5 McLean, 62 ; *Rice v. Heald*, 13 Pac. L. R. 34 ; *Isaacs v. Abrams*, 14 O. G. 861.

This doctrine was followed in *Strobridge v. Lindsay*, 2 Fed. Rep. 692, and in addition it was held that "the validity of a patent is not determinable by the degree of novelty or invention displayed."

The invention is a combination and not a mere aggregation.

The Circuit Court in holding that the invention of the appellant was an "obvious" deduction from the prior use of mirrors generally and of locomotive mirrors in particular, has overlooked the facts as shown by the testimony, that experiment was not only exercised, but was needed to bring the idea of the appellant to a practical embodiment. And this embodiment of the idea has become a pronounced success.

Argument of counsel.

The attributes of the result of the exercise of the inventive faculty are novelty and utility. As both of these attributes are conceded to exist in appellant's combination, we submit that it is patentable. *Forbush v. Cook*, 2 Fish. 671; *Colgate v. W. U. Tel. Co.*, 15 Blatch. 365.

Messrs. Francis Rawle and Walter George Smith, for appellee:

It is difficult to perceive in what sense O'Haire was the first inventor of his device. It is clear that he was not so in fact. Little was nearly four years before him; and Little not only invented the device, but he published his invention broadly to the world.

It is submitted that the defence of want of novelty is made out as respects the O'Haire patent, and that his patent is void.

Johnson's English patent, 1857, shows a method of operating sliding car doors by means of a rock shaft under the car, carrying at the end a toothed wheel gearing into a toothed rack on the door, the shaft being caused to rotate by a lever on the front end of it, operated by the guard. This patent was the cause of much controversy.

The defendants called three skilled mechanics, who testified that they could construct an operative door opener from this patent.

It is respectfully submitted that O'Haire's claim is limited to the special location of his rock-shaft, and that the defendants have not infringed letters patent, No. 142,810, by their patented rock-shaft running under the car.

In regard to Stephenson's patent we submit that the patent was completely anticipated by the signal device of John G. Brill in 1858 and 1859, and by the English devices of Colles in 1867 and Tattersall in 1864.

Besides the above completely anticipating devices, we find, in use in this country and in England, prior to 1872—signal cords *on the sides of cars*, just where Stephenson puts them; also *center line signal cords with pendants* for

Opinion of the court.

the use of passengers ; and a rigid center line rod, moved longitudinally by pendants running down the rafters, within easy reach of the passengers when seated ; and a cord situate in any "*convenient part of the carriage,*" with pendants "for the use of passengers," and many other forms.

What need be said by way of argument upon so plain a case ? The mere statement of facts seems enough.

Mr. Justice Woods (a) delivered the opinion of the court :

We shall consider each of the patents in the order above stated.

The invention described in the O'Haire patent consists of a combination and arrangement of devices by which the rear door of a street-car can be opened and closed by the driver from the front platform where he stands, in order to let passengers into or out of the car.

The drawing by which the specification is illustrated shows the frame of an ordinary street-car provided with a door which is supported upon and moves back and forth upon suitable pulleys and ways, which, it is said, may be arranged in any desired manner. Passing through the bar from which the hand-straps are suspended, and which is made hollow, is a rod or rock-shaft which has a lever or crank upon its front end within easy reach of the driver. Upon its rear end is a similar lever or crank carrying a roller, which works up and down in a rectangular guiding-frame secured to the rear edge of the door and by which the door is opened and closed. The driver, by a slight push upon the front lever, can open the door, or by a pull toward him, can close it without moving off his seat.

The claim is as follows : "The rod *i*, crank or lever 3, and guiding-frame 6, secured to the door and combined with an operating lever for the driver, substantially as shown and described."

114 U. S. 151.

(a) 114 U. S. inserts "after making the foregoing statement,"

Opinion of the court.

The infringement charged against the defendant was the use of cars containing an "improvement in operating car-doors," described in the patent of George M. Brill, dated December 1st, 1874. The device covered by this patent was substantially the same as that described in the O'Haire patent, except that the rock-shaft ran along the bottom of the car instead of through the bar from which the hand-straps were suspended.

There is no evidence to show that O'Haire's invention antedates the application for his patent, which was made on June 27, 1873. Considering the state of the art at that time, we are of opinion that the device covered by his patent does not embody anything new which the defendant infringes. The opening and closing of the rear door of a street-car from the front platform is not new. The specification of the O'Haire patent says: "I am aware that it is not new to operate the door from the front platform of the car, as this has heretofore been accomplished by means of an endless cord which passes through the rods to which the holding-straps are secured, and I therefore disclaim such invention."

At the date of O'Haire's application it was well known, as is shown by the evidence, that doors and window-shutters guided by slides, both in vehicles and apartments, were opened and closed by mechanism used by persons placed in such situations that they could neither reach nor open and close the doors or shutters directly. The device of O'Haire must, therefore, to be the subject of a valid patent, embody some new means for accomplishing this end.

The elements of which his contrivance was made up were the rod or rock-shaft, reaching from the front to the rear of the car, the lever by which a rocking motion was given to the shaft, and the means used for communicating motion from the shaft to the door.

The testimony is conclusive to show that there is nothing new in the rock-shaft or in the lever by which it is moved. Long before the date of O'Haire's application, the evidence

Opinion of the court.

is clear that rock-shafts operated by a lever or crank were used to open and close the doors of furnaces, and the window and door openings of sugar-refineries, by persons standing at a distance from the windows and doors to be opened and closed. A rock-shaft moved by a lever at the end of a railway-carriage for the purpose of opening and closing the sliding doors of the carriage was described in the English letters patent set out in the record of John Johnson, dated March 3, 1857. The use of a rock-shaft for a similar purpose, namely, the opening and closing of sliding window-blinds, is also shown in the patent of Daniel Kidder, dated June 8, 1869. Rock-shafts, for the same purpose, are shown in the patent of Darwin D. Douglass, dated June 11, 1861, and the patent of W. H. Brown, dated February 23, 1864. The shaft in the Brown patent was moved by a lever, and in the Kidder and Douglass patents by a knob attached to its end, which is the well-known equivalent of a lever. It appears, therefore, that the use of a rock-shaft actuated by a lever for communicating motion was an old device which had been in use long before the date of the O'Haire patent.

It remains to consider the mode adopted by O'Haire for communicating motion from his rock-shaft to the door of the car. We find it to be one of a number of old and well-known devices for changing rotary into horizontal or rectilinear motion. The testimony shows that the devices long used for this purpose are a pinion or segment of a pinion whose teeth interlock with the teeth of a straight bar or rack or a rigid lever attached at one end to the rock-shaft, and having on the other a pin or roller working in a slot formed on the door or shutter to be moved. Sometimes the slot is in the lever, and the pin or roller is on the door or shutter. These devices perform the same functions in substantially the same manner, and have long been recognized as mechanical equivalents.

The device covered by the patent of O'Haire, therefore, consists of a rock-shaft with a lever attached for the pur-

Opinion of the court.

pose of giving the shaft a rocking motion, combined with a well-known and long-used device by which the rocking motion was changed into a rectilinear motion and communicated to the door of a car. No one of these devices can be claimed as new.

If there is any ingenuity displayed in the contrivance described in the O'Haire patent, it must, therefore, be in the combination of these devices to attain a result. The claim of the patent is for such a combination. But in our opinion this combination was anticipated by the patents of both Douglass and Brown before mentioned.

The inventions described in these patents are for the opening and closing of outside shutters from the inside of a house without opening the windows, and they consist of a rock-shaft passing through the wall of the house to which a rocking motion is imparted from the inside of the house in the one case by a knob, and in the other by a lever or handle on the inner end of the shaft. By means of a pinion on the outer end of the rock-shaft applied to a toothed-rack on the shutter, a rectilinear sliding motion is imparted to the shutter, which is thus opened and closed. The rock-shafts in these patents are identical with the rod or shaft in the O'Haire patent; the lever in the Brown patent, by which the rock-shaft is moved, is the same as the lever in the O'Haire patent, and the knob in the Douglass shaft is its well-known equivalent; and the contrivance by pinion and rack for transmitting motion from the rock-shaft to the shutter is the well-known and long-used equivalent of the devices used for a similar purpose in the O'Haire contrivance. We find, therefore, that none of the separate elements of the devices described in the O'Haire patent are new, nor is the combination new. So far, therefore, we find no patentable invention in the contrivance described in the patent under consideration. It was said by this court in *Smith v. Nichols*, 21 Wall. 112 [9 Am. & Eng. 425,] that "a mere carrying forward, a new or more extended application of the

Opinion of the court.

original thought, a change only in form, proportions, or degree, the substitution of equivalents doing substantially the same thing in the same way by substantially the same means, with better results, is not such invention as will sustain a patent." So in *Penn. R. R. Co. v. Locomotive Truck Co.*, 110 U. S. 490 [15 Am. & Eng. 148,] Mr. Justice Gray, delivering the opinion of the court, said: "The application of an old process or machine to a similar or analogous subject, with no change in the manner of application and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated." These authorities are pertinent. See also, *Vinton v. Hamilton*, 104 U. S. 485 [13 Am. & Eng. 394;] *Blake v. San Francisco*, 113 U. S. 679 [15 Am. & Eng. 535.]

If, therefore, there is any patentable novelty in the O'Haire contrivance, it is in the placing of the rock-shaft inside the bar to which the hand-straps are attached. But the plaintiff's counsel, in order to bring the device used by the defendant within the monopoly of the O'Haire patent, insist that this is no part of the patented contrivance, and the testimony shows that the defendant does not use it.

We are of opinion, therefore, that, construing the patent of O'Haire, in view of the state of the art at the date of its issue, as we are compelled to do, in order to leave any ground whatever on which it may be sustained, the defendant does not infringe.

We have next to consider the patent granted to the plaintiff, dated March 30, 1875, "for an improvement in signaling-devices for street-cars."

The specification thus states the object of the contrivance described in the patent:

"The prevalence of street-cars managed by the driver, without the aid of a conductor, makes it necessary that every possible facility should be provided for him as well as the passengers.

"The ordinary street-car has a signal-bell located at each

Opinion of the court.

end, with a bell-strap attached thereto, which runs centrally along the ridge or highest part of the ceiling. This strap, as thus located, is inaccessible to many passengers.

“My improvement is intended to remedy this trouble, and consists in a new combination and arrangement with a street-car of bells or gongs and of the cords or straps which operate them, whereby passengers can, without rising from their seats, signal to the driver. This is of primary importance to invalids, ladies, and children, and that more especially when the car is crowded.”

The device covered by the patent consists of the placing of two bells, attached to the rafters of the bonnet or hood of the driver's platform, one at each corner of the front end of the car. To the hammer of each bell is attached one end of a bell-cord, the other end of which is attached to the inner side of the rear wall of the car, the cords being led along the lower margin of the ceiling, one on each side the car, from which bell-pulls or hand-straps are suspended at intervals within easy reach of the seated passengers, so that they, without rising from their seats, can ring the bell.

The claim was as follows: “In a street-car, two bell-cords, each provided with a system of pull-straps, and arranged in such manner as to pass along the lower margin of the roof on the opposite sides of the car and connect directly with a signal bell or gong attached to the outside of the driver's end of the car, substantially as and for the purposes set forth.”

We are of opinion that there is no patentable invention described in this patent. Bell-straps or cords running from one end of an omnibus or street-car to the other, under the middle of the ceiling, were well known and in common use years before the application of Stephenson for his patent. The fact that they were so placed and used is mentioned in the specification. The evidence also establishes the fact, that before the year 1870 it was a common practice to attach pendent bell-pulls or hand-straps to this central cord so as

Opinion of the court.

to bring it within easier reach of the passengers. The evidence shows that many of the cars in which such hand-straps or bell-pulls were used were built and sold in New York. The use of such pendent hand-straps long before the application of Stephenson for the patent now under consideration is conclusively proven.

It is also shown by the evidence that as early as the year 1861 a bell cord or strap running along the sides of the cars above the heads of the passengers was publicly used on street-cars in Boston and Philadelphia, and the same arrangement of the cord or strap was shown in the patent of Charles Carr, issued July 5, 1870. When, therefore, the patent of Stephenson for his improvement in signaling-devices for street-cars was applied for in March, 1875, the only advance in the art which his specification showed was the applying to the cords running along the sides of the cars of the bell-pulls or hand-straps which had before then been attached to the cord running over the middle of the aisle. This, in our judgment, did not require the least degree of ingenuity, and cannot be called invention. *Hotchkiss v. Greenwood*, 11 How. 248 [5 Am. & Eng. 240;] *Stimpson v. Woodman*, 10 Wall. 117 [8 Am. & Eng. 221;] *Atlantic Works v. Brady*, 107 U. S. 192 [14 Am. & Eng. 380;] *Slawson v. Grand Street Railroad Co.*, 107 U. S. 649 [14 Am. & Eng. 475;] *King v. Gallun*, 109 U. S. 99 [14 Am. & Eng. 559;] *Phillips v. Detroit*, 111 U. S. 604 [15 Am. & Eng. 269.] The patent, therefore, by which the plaintiff seeks to embrace in his monopoly such an arrangement of the signal-cords and hand-straps of a street-car is void.

The third patent, which the plaintiff avers is infringed by the defendant, is for the improvement in street-cars granted to John Stephenson, the appellant, September 7, 1875, on an application dated August 7, 1874. It is thus described in the specification:

“In running street-cars it has been found to be a serious source of trouble to have the driver continually turning

Opinion of the court.

around to ascertain when it is necessary to stop to permit passengers to enter or leave the car, as such constantly takes away his attention from his horses, and that frequently, when it is most required.

“To obviate this trouble is the object of my present improvement. My invention for this purpose consists in combining a mirror with the front hood of the car, it being so arranged in connection therewith and with an opening in the front end of the car as to give to the driver a clear view of the inside of the car and through the entrance door of the latter, and that without the necessity of his having to turn around for such purpose, thereby enabling him, without withdrawing his attention from the horses, to see when it is necessary to stop, either to receive a passenger or to allow one to get out.

“This mirror is set at a small angle to a horizontal plane, so that its upper edge will project rearwardly beyond its lower edge, it being placed at such angle as will enable it, through the opening F in the front end of the car, to give the best view of the interior of the car, and through the glass windows of the entrance door A.”

The claim was as follows: “The combination of a bonnet E provided with a mirror C, (b) with an opening, or an opening covered by a transparent medium F, in the front end of a street-car, substantially as and for the purposes set forth.”

A combination is patentable only when the several elements of which it is composed produce by their joint action a new and useful result, or an old result in a cheaper or otherwise more advantageous way.

The elements of which the combination described in this patent is composed are all old and well known. They were a mirror, the hood of a street-car over the driver's platform, and a glass panel in the front end of the car over the door. We are of opinion that the alleged combination of these

Notes and citations.

three elements, as described in this patent, is not patentable. There is, in fact, no combination, but a mere aggregation of separate devices, each of which performs the function for which, when used separately, it was adapted, and does not contribute to any new result the product of their joint use. The result attained is merely the reflection of an object in a mirror. The hood and the glass panel in the end of the car do not change in any degree the function of the mirror. It is used as a mirror only. The function of the hood is not changed by the mirror or glass panel, or both. It is a hood only on which, as in the wall of a room, the mirror is hung. The use of a glass instead of a wooden panel in the front end of the car simply removes an opaque obstacle between the mirror and the object to be reflected by it. Neither one of the three elements of the alleged combination performs any new office or imparts any new power to the others, and, combined, they do not produce any new result or any old result more cheaply or otherwise more advantageously. There is, therefore, no patentable combination.

This conclusion is illustrated and confirmed by the following cases: *Hailes v. Van Wormer*, 20 Wall. 353 [9 Am. & Eng. 340;] *Reckendorfer v. Faber*, 92 U. S. 347 [10 Am. & Eng. 373;] *Pickering v. McCullough*, 104 U. S. 310 [13 Am. & Eng. 238.]

It results from the views we have expressed that the decree of the Circuit Court dismissing the bill was right. It is, therefore, affirmed.

114 U. S. 157-158.

Notes:

3. Aggregation :

Hailes v. Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.]

Reckendorfer v. Faber, 92 U. S. 347 [10 Am. & Eng. 373.]

Harness Co. v. Welling, 97 U. S. 7 [11 Am. & Eng. 479.]

Notes and citations.

Pickering *v.* McCullough, 104 U. S. 310 [13 Am. & Eng. 238.]

Packing Co. Cases, 105 U. S. 566 [14 Am. & Eng. 49.]

Tack Co. *v.* Two Rivers Co., 109 U. S. 117 [14 Am. & Eng. 571.]

Bussey *v.* Excelsior Mnfg. Co., 110 U. S. 131 [15 Am. & Eng. 77.]

Beecher Mnfg. Co. *v.* Atwater Mnfg. Co., 114 U. S. 523 [p. 106 *post.*]

Thatcher Heating Co. *v.* Burtis, 121 U. S. 286.

Mosler Safe &c. Co. *v.* Mosler, Bahmann & Co., 127 U. S. 354.

Hendy *v.* Golden State &c. Works, 127 U. S. 370.

Patents in suit:

No. 142,810. O'Haire, J. A. September 16, 1873. Street-Car.

No. 161,568. Stephenson, J. March 30, 1875. Signaling Drivers on Street-Cars.

No. 167,585. Stephenson, J. September 7, 1875. Street-Cars.

OTHER SUITS ON SAME PATENTS:

Stephenson *v.* Brooklyn, Cross-Town R. Co., 1881. 19 Blatch. 473; 14 Fed. Rep. 457.

Cited:

IN SUPREME COURT IN:

Beecher Mnfg. Co. *v.* Atwater Mnfg. Co., 1885. 114 U. S. 523; Bk. 29 L. ed. 232 [p. 106 *post.*]

Notes and citations.

Clark Pomace Holder Co. *v.* Ferguson, 1886. 119 U. S. 335; Bk. 30 L. ed. 406.

Watson *v.* Cincinnati Ry. Co., 1889. 132 U. S. 161.

Hill *v.* Wooster, 1889. 132 U. S. 693.

IN CIRCUIT COURTS IN :

Railway Register Mnfg. Co. *v.* North Hudson R. Co., August, 1885. 24 Fed. Rep. 793; 33 O. G. 355.

Hoe *v.* Kahler, October, 1885. 25 Fed. Rep. 271; 23 Blatch. 354; 34 O. G. 127.

Register Mnfg. Co. *v.* North Hudson R. Co., January, 1886. 26 Fed. Rep. 411.

Niles Tool Works *v.* Betts Machine Co., April, 1886. 27 Fed. Rep. 301.

Leonard *v.* Lovell, December, 1886. 29 Fed. Rep. 310.

Cluett *v.* Clafin, June, 1887. 41 O. G. 1042.

Holmes Electric Protective Co. *v.* Metropolitan Burglar Alarm Co., December, 1887. 33 Fed. Rep. 254.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. p. 254.

Walker on Pats., 2d ed., 1889. pp. 21, 31.

[illegible]

Syllabus.

WESTERN ELECTRIC MANUFACTURING COMPANY, APPELLANT, v. ANSONIA BRASS AND COPPER COMPANY.*

114 U. S. 447-453. Oct. Term, 1884.

[Bk. 29, L. ed. 210; 31 O. G. 1305.]

Affirming *Ibid*, 9 Fed. Rep. 706.

Argued April 2, 1885. Decided April 20, 1885.

Process and product—validity. Particular patent construed and held wanting in novelty and invention. Vague description of matter not claimed confers no protection.

1. If the patent for the process is invalid, that for the product of the process is also. (p. 98.)
2. Reissued letters patent, No. 6,954, J. Olmstead, February 29, 1876, Process (original No. 129,858, July 13, 1872,) Insulating Telegraph Wires, *held*, to consist in compressing the wax or other suitable material into the pores of the fibrous covering of the wire without scraping off any part of it. This process was anticipated by letters patent to Dundonald and to Baudouin in Great Britain, which describes the compressing of the wax, etc., to attain the same result, namely, the insulation of the wire. The patent, therefore, covers an old process applied to the same subject, with no change in the manner of applying it, and with no result substantially distinct in its nature. It cannot, therefore, be a valid patent. (p. 99.)
3. The difference between complainant's reissue, No. 6,954, and the Baudouin process consists merely in the use of a greater quantity of wax. This may be an improvement on the latter process, but it does not involve invention. (p. 101.)
4. Where instead of describing in his process specification the cooling of the paraffine or wax before compressing, he mentioned as a quality of the product, the polished appearance of the surface, and asked the court to infer the process from that quality, and it was not even referred to in the claim; *held*,

* See Explanation of Notes, page III.

Statement of the case.

that such a vague and inverted method of description was not a compliance with the statute, and could not therefore be held to be covered by the patent. (p. 101.)

5. Reissued letters patent, No. 6,955, J. Olmstead, February 24, 1876, Product (original No. 129,858, July 13, 1872,) Insulating Telegraph Wires, *held*, void in view of the void process patent. (p. 103.)

[Citations in the opinion of the court:]

Pennsylvania Railroad Co. v. Locomotive Truck Co., 110 U. S. 490. p. 101.

Vinton v. Hamilton, 104 U. S. 485 [13 Am. & Eng. 394.] p. 101.

Railroad Co. v. Mellon, 104 U. S. 112 [13 Am. & Eng. 200.] p. 103.

Appeal from the Circuit Court of the United States for the District of Connecticut.

The history and facts of the case appear in the

Statement of the case by Mr. Justice Woods :

The case was a suit in equity, brought by the appellant, the Western Electric Manufacturing Company against the Ansonia Brass and Copper Company, to restrain the infringement of two reissued letters patent, numbered 6,954 and 6,955, respectively, granted to the appellant as the assignee of Joseph Olmstead, both dated February 29, 1874, for improvements in insulating telegraph wires. The reissues are divisions of original letters patent, No. 129,858, dated July 23, 1872. The descriptive specifications of the two patents were identical. They differed only in the claims, the first being for a process, and the second for the product of the process.

The specification of both patents, after stating that Olmstead had invented a new and useful improvement in insulating telegraph wires, proceeded as follows :

“The method of insulating now in use consists in braiding over the wires a fibrous covering, after which it is dipped in wax, for the purpose of filling and closing its pores, and, after a subsequent scraping to remove the surplus wax, it is ready for use. This method is, however, objectiona-

Argument of counsel.

ble, inasmuch as it leaves the covering in a very rough and soft condition, and fails to secure perfect insulation.

“In my improved method, after the wire has received its coating, I dip it in paraffine or wax, after which, instead of scraping off the surplus coating, I pass the whole through a suitable machine, which compresses the covering and forces the paraffine or wax into the pores and secures perfect insulation. By so compressing the covering the paraffine or wax is forced into the pores, and the surface becomes and appears polished.

“Wire insulated in this manner is entirely impervious to the atmosphere, of greater durability, and less cumbersome than any heretofore made.”

The claim of the process, patent No. 6,954, was as follows: “The method of insulating telegraph wire by first filling the pores of the covering and subsequently compressing this covering, and thereby polishing its surface, substantially as described.”

The claim of the product, patent No. 6,955, was: “An insulated telegraph wire, the covering of which has its pores filled and its surface polished, substantially as described.”

The defendant denied in its answer that Olmstead was the first and original inventor of the improvement described in the patents, or of any substantial or material part thereof, or that the same was patentable or the subject-matter of invention, and that the alleged invention had been previously patented by letters patent of Great Britain granted to Thomas Earl of Dundonald, dated July 22, 1851, and by letters patent of Great Britain granted to Felix M. Baudouin, dated April 3, 1857. The defendant also denied infringement.

The Circuit Court, on final hearing, dismissed the bill, and the plaintiff appealed.

Mr. George P. Barton, for appellant :

The only question raised by this appeal is whether in view

Argument of counsel.

of the state of the art as it existed prior to 1872, the improvements made by Olmstead are patentable. The court below answered this question in the negative, relying upon the case of *Brown v. Piper*, 91 U. S. 37 [10 Am. & Eng. 272.] The claim in that case was: "Preserving fish or other articles in a close chamber by means of a freezing mixture, having no contact with the atmosphere of the preserving chamber, substantially as set forth." It was proven that for years previous, corpses had been preserved in the same way, and hence the patent was declared void.

We contend that our case is clearly distinguishable from *Brown v. Piper*, and especially we contend that as the wire insulated according to Dundonald's and Baudouin's patents, never came into public use, but on the contrary proved a failure, their processes and products, whatever they may have been, should not be considered as anticipating the process and product invented by Olmstead, which at once were recognized by all electricians as a great advance in the art, and which at once took the market.

The difference between this wire case and the *Brown v. Piper* fish case is the difference between success and failure.

Messrs. O. H. Platt and William B. Wooster, for appellee:

Long before Olmstead's claimed invention, every step, including the final or third step under his method of compressing or polishing covered and insulated telegraph wire, was well known.

This is proved by the testimony of Mr. Serrell, a witness of great ability and research.

The discovery of a new effect produced by old agents operating by old means upon old subjects, however novel and important, is not patentable. *Morton v. N. Y. Eye Infirmary*, 2 Fish. 320; *Corn-Planter Patent*, 23 Wall. 181 [10 Am. & Eng. 1;] *Brown v. Piper*, 91 U. S. 41 [10 Am. & Eng. 272;] *Collar Co. v. Van Deusen*, 23 Wall. 563 [10 Am. & Eng. 156;] *Glue Co. v. Upton*, 97 U. S. 3 [11 Am. & Eng.

Opinion of the court.

458;] Rubber Coated Harness Trimming Co. v. Welling, 97 U. S. 10 [11 Am. & Eng. 479;] Reckendorfer v. Faber, 92 U. S. 347 [10 Am. & Eng. 373;] Fricke v. Hum, 22 Fed. Rep. 304; Phillips v. Detroit, 111 U. S. 604 [15 Am. & Eng. 269.]

No new article of manufacture is produced by the process claimed in the plaintiff's patent.

Invention is not found in *smoothing* the *whole wax* that *adheres to wire* as it cools. The process of compressing and polishing is the same and identical whether a part is removed by scraping, or whether the polishing takes place without removing the surplus. The product or result is identical, except that the one may be more bulky and may be better insulated. The witness Pope says "The difference, if any, is *merely of one degree, and not of kind.*"

But this is not the subject of a patent.

In Smith v. Nichols, 21 Wall. 112 [9 Am. & Eng. 425;] where a patent for an improvement in weaving elastic fabric was declared invalid, the court says: "It is the invention of what is *new*, and not the arrival at comparative superiority or greater excellence in that which was already known, which the law protects."

"A mere carrying forward, or new, or more extended application of the original thought, a change only in form, proportion, or *degree*, the substitution of equivalents, doing substantially the same thing in the same way by substantially the same means with better results, is not such invention as will sustain a patent." Smith v. Nichols, 21 Wall. 119 [9 Am. & Eng. 425.]

Mr. Justice Woods delivered the opinion of the court: (a)

It is clear that the two patents must stand or fall together. If the patent for the process is invalid so must be the patent for the product. What we have to say will refer to the process patent.

114 U. S. 449.

(a) 114 U. S. adds "He stated the facts in the foregoing language, and continued:"

Opinion of the court.

The alleged invention described in the patent is not for insulating telegraph wires, for that art long antedated the original patent. The specification disclaims as a part of the invention the braiding of a fibrous covering over the wire and then dipping it in wax for the purpose of filling and closing the pores, and the subsequent scraping of the surplus wax from the wire. The patent does not cover the material in which the wire, after it has received its fibrous coating, is dipped, which may be either paraffine, wax, or bitumen, or any other suitable material. The three substances mentioned had long been used for that purpose. Nor does the patent specify or cover any device by which the process is to be carried on. Any suitable machine may be used.

The process described by the patent consists, therefore, simply in this: After the wire has received its fibrous coating, and been dipped in paraffine, wax, or other suitable substance, the compressing and forcing of the paraffine, wax, or other substance, without scraping off any part of it, into the pores of the fibrous material by some suitable means.

We think this process was not new.

It was subsequently (*b*) anticipated both by the process described in the patent of Dundonald and in that of Baudouin, the first dated January 22, 1852, and the other April 3, 1857. Dundonald describes his process thus:

“I also employ a bituminous material to cover, and thus insulate, the conducting wires of electric telegraphs, which are intended to be placed under ground. For this purpose I employ the said bitumen, either simple or compounded, of a flexible description, and pass the wire through it when it is in a melted state, then causing the wire to pass through some die or orifice, which will deprive it of all the superfluous bitumen. * * * The incasement of this wire with bitumen may also be effected by covering it with a filamentous material, which has been previously saturated with melted bitumen, and then passing the wire so covered through

114 U. S. 449-450.

(*b*) 114 U. S. substitutes for “subsequently” “substantially”

Opinion of the court.

a heated die or orifice, so as to melt or soften the bitumen upon the filamentous material, and press the whole of the coating against the wire in such a way as to cause it to form one compact continuous covering of the wire, and thus insure its insulation."

The patent of Baudouin describes his process as follows:

"My invention relates to the preparation of conductors of electricity for electric telegraphs, being wires insulated to prevent the loss or deterioration of the electric currents used for that purpose, and also in the machinery for the preparation or manufacture of such conductors. I coat the wires with bituminous or such like fatty matters that are not liable to become hard or crack, but, on the contrary, are constantly acted on by the temperature of the atmosphere. Coatings of this material in themselves are insufficient to maintain the proper protection and insulation for telegraph conductors, but when combined with other materials, such as paper, woven fabrics of cotton, silk, wool, or hemp, in a particular manner, are well adapted for the purpose.

"I prefer to use three ribbons and bobbins for this purpose, the first covering of the wire being enveloped by the second in such manner that the helical junction of the first ribbon is covered by the second, and the second by the third. The wire is passed through a bath of hot bitumen, and has the superfluous matter removed by passing through suitable dies or parts to scrape and smooth its surface, and render it of uniform thickness. The first and second ribbons are also passed through bituminous or other suitable matter to render them more impervious to electricity. The coated and lapped wire is passed through suitable dies to remove superfluous matter, to smooth down the lapping of the ribbons, and to compress and cause their proper adhesion.

"The coated and lapped wire passes through dies or smoothing holes both in entering and leaving the rotating frame; these dies or smoothers have a rotatory motion, the better to enable them to wipe and smooth the coated wire."

Opinion of the court.

It is plain that these patents anticipate the process set out in the specification of the Olmstead process patent. They all three describe the compressing of the wax, paraffine, or bitumen coating of a wire covered with the fibrous material, so as to attain the same result, namely: the insulation of the wire.

The Olmstead patent, therefore, covers an old process applied to the same subject, with no change in the manner of applying it, and with no result substantially distinct in its nature. It cannot, therefore, be a valid patent. Penn. Railroad Co. v. Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148;] Vinton v. Hamilton, 104 U. S. 485 [13 Am. & Eng. 394.]

The fact that in the process described in the Olmstead patent the surplus wax or paraffine is not scraped off, but all that adheres to the wire is compressed against it and forms part of the covering, is relied on to distinguish that process from those of Dundonald and Baudouin. But the Dundonald process does not differ in this respect from that of Olmstead, for in the Dundonald process the whole of the coating is pressed against the wire, and is left to form the covering; and as to the Baudouin process, the difference consists merely in the use of a greater quantity of wax or paraffine to form the coating. This may be an improvement upon the Baudouin process, but it does not involve invention.

So far as the present case is concerned, another answer to this contention of the appellant is, that, in this respect, the defendant follows the Baudouin, and not the Olmstead process, by scraping off the superfluous material.

It was insisted in argument, by appellant's counsel, that one of the features of the process described in the Olmstead patent was the allowing of the wax or paraffine covering to cool before compressing it upon the wire, and as this was not done in the Dundonald or Baudouin process, they did not anticipate the Olmstead process. But neither the specifica-

Opinion of the court.

tion nor claim of the Olmstead patent mentions, as a part of the process, the cooling of the wax or paraffine coating before compressing it upon the wire. The appellant's counsel, however, contends that it must be considered a part of the process, because the polished appearance of the surface of the covering described in the specification is the result of allowing the paraffine or wax to cool before compressing it upon the wire. But, clearly, a patentee cannot claim the benefit of an element of his invention thus vaguely and indefinitely hinted at. The law in force when the patent of Olmstead was issued (Act of July 8, 1870 (c) [16 Stat. at L. 201,] section 4888, Revised Statutes) requires that "Before any inventor (*d*) shall receive a patent for his invention or discovery he shall file in the Patent Office a written description of the same, and of the manner and process of making, constructing, compounding, and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which it appertains, or with which it is most nearly connected, to make, construct, compound, or use the same, and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery." It is clear that if the patentee intended to include the cooling of the wax or paraffine before compressing it upon the wire, he has failed to describe in his specification that element of his invention, as required by the statute. Instead of describing the process he mentions a quality of the product, and asks the court to infer the process from that quality. Such a vague and inverted method of description is not a compliance with the statute. That part of the alleged invention is not even referred to in the most distant manner in the claim. It has been held by this court that "the scope of letters patent should be limited to the invention covered by the claim; and, though the claim may be illustrated, it cannot be en-

114 U. S. 452.

(c) 114 U. S. adds "Sec. 26."

(d) 114 U. S. adds "or discoverer"

Notes and citations.

larged by the language in other parts of the specification. *R. R. Co. v. Mellon*, 104 U. S. 112 [13 Am. & Eng. 200.] The element of the process under consideration cannot, therefore, be held to be covered by the patent. The contention that the patentee intended to include it in his process is evidently an afterthought.

The result of the views expressed is that both the patents sued on are void.

Decree affirmed.

114 U. S. 453.

Notes :

1. If process is void, product is also void; see *Packing Co. Cases*, 105 U. S. 566 [14 Am. & Eng. 49.]
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2. See *Dreyfus v. Searle*, 124 U. S. 60.
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4. Sufficient description of process:

Tilghman v. Proctor, 102 U. S. 707 [13 Am. & Eng. 29.]

Lawther v. Hamilton, 124 U. S. 32.

Béné v. Jeantet, 129 U. S. 683.

Patent in suit :

No. 129,858. Olmstead, J. July 13, 1872. Reissues Nos. 6,954 and 6,955. February 29, 1876. Insulating Telegraph Wires.

104 WESTERN ELECTRIC CO. v. ANSONIA CO. [Sup. Ct.]

Notes and citations.

OTHER SUITS ON SAME PATENT :

**Western Electric Mnfg. Co. v. Ansonia Brass & Copper Co., 1881.
9 Fed. Rep. 706; 20 Blatch. 170.**

Cited :

IN CIRCUIT COURTS IN :

**Schillinger v. Cranford, July, 1885. 4 Mackey's Rep. 450 ; 2 Cen-
tral Rep. 680.**

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. pp. 41, 76, 226, 350.

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Syllabus.

BEECHER MANUFACTURING COMPANY, APPELLANT, v. ATWATER MANUFACTURING COMPANY ET AL.*

114 U. S. 523-524. Oct. Term, 1884.

[Bk. 29, L. ed. 232; 31 O. G. 1306.]

Reversing Atwater Mnfg. Co. v. Beecher Mnfg. Co., 8 Fed. Rep. 608.

Argued April 23, 1885. Decided May 4, 1885.

Particular patent construed. Reissue for matter expressly disclaimed. Want of invention.

1. Claim 1 of reissued letters patent, No. 8,694, R. R. Miller, May 6, 1879, (original No. 100,053, February 22, 1870,) Dies, *held*, void as being for matter expressly disclaimed in the original patent, and also as wanting in novelty. (p. 116.)
2. Claim 2 for the use in succession of two distinct pairs of dies of well-known kinds not combined in one machine, nor co-operating to one result, but each pair doing by itself its own work, *held*, not a patentable invention. (p. 116.)

[Citations in the opinion of the court:]

Hailes v. Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.] p. 117.

Pickering v. McCullough, 104 U. S. 310 [13 Am. & Eng. 238.] p. 117.

Stephenson v. R. R. Co., 114 U. S. 149 [p. 63 *ante*.] p. 117.

Appeal from the Circuit Court of the United States for the District of Connecticut.

The history and facts of the case appear in the opinion of the court.

The following are the drawings and specifications of the reissued letters patent referred to in the opinion of the court:

*See Explanation of Notes, page III.

Statement of the case.

ROBERT R. MILLER, OF PLANTSVILLE, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO HIMSELF, J. B. SAVAGE, AND ATWATER MANUFACTURING COMPANY.

IMPROVEMENT IN SERIES OF DIES FOR FORMING THE HEADS OF KING-BOLTS.

Specification forming part of Letters Patent, No. 100,053, dated February 22, 1870 ; Reissue, No. 8,694, dated May 6, 1879 ; application filed March 4, 1879

To all whom it may concern :

Be it known that I, Robert R. Miller, of Plantsville, in the county of Hartford and State of Connecticut, did invent certain new and useful Improvements in Dies for Forming the Heads of King-Bolts, for which Letters Patent No. 100,053 were issued to me upon the 22d day of February, 1870, which Letters Patent have been found defective in that the specification and claims do not cover all of the invention shown and described in the application filed by me upon the 31st day of July, A. D. 1869. Now, therefore, being desirous of reissuing the said Letters Patent, I have prepared and do hereby declare the following to be a full, clear, and exact description of my said invention, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a perspective view of the blank used in the formation of my king-bolt. Fig. 2 is a like view of the same after passing through the forming-dies. Fig. 3 is a perspective view of said blank after having been operated upon by the bending-dies. Fig. 4 is a like view of the completed king-bolt. Fig. 5 is a perspective view of the dies used for forming the clip-arms, said dies being separated

Statement of the case.

from each other. Fig. 6 is a like view of the dies used for bending said clip-arms to shape. Fig. 7 is a central longitudinal section of said forming-dies as they appear when closed together with a clip-blank within the lower die; and Figs. 8 and 9 are, respectively, longitudinal and cross sections of the bending-dies upon central lines as they appear with the completed king-bolt between their faces.

Letters of like name and kind refer to like parts in each of the figures.

The design of my invention is to enable clip king-bolts to be easily and cheaply made by machinery; to which end it consists, principally, in the forming-dies constructed in the manner substantially as hereinafter shown.

It consists, further, in the series of dies, substantially as and for the purpose hereinafter shown and described.

In the construction of king-bolts I employ a blank, A, which is formed by splitting the end of a metal bar longitudinally for a distance of about two inches, turning the forks or arms *a* outward at substantially a right angle with each other, and then severing said blank from the bar at such distance below said arms as to leave the necessary metal for forming the spindle.

The next operation consists in giving form to the arms *a*, which is accomplished by the following-described means: Within the upper side of a metal block, B, is formed a vertical central opening, *b*, that corresponds in general shape and diameter to the like features of the body of the blank A, and has such depth as may be desired for said part. Extending lengthwise of the block B is a half-round groove, *b'*, which intersects the opening or recess *b*, and has a slightly greater depth at its ends than at its longitudinal center, and a slightly greater width at the latter point than at said ends. At the upper end of said recess *b* the corners are rounded, as shown. The blank A is suitably heated and placed within the die B, its body being within the recess *b* and its arms *a* over the grooves *b'*, after which a plane-faced upper die, C, is caused to impinge one or more

R. B. MILLER.

Assignor, by means assignments, to himself, J. B. SAVAGE & ATWATER MANUFACTURING CO.
Series of Dies for Forming the Heads of King Bolts.
No. 8,694. Reissued May 6, 1879.

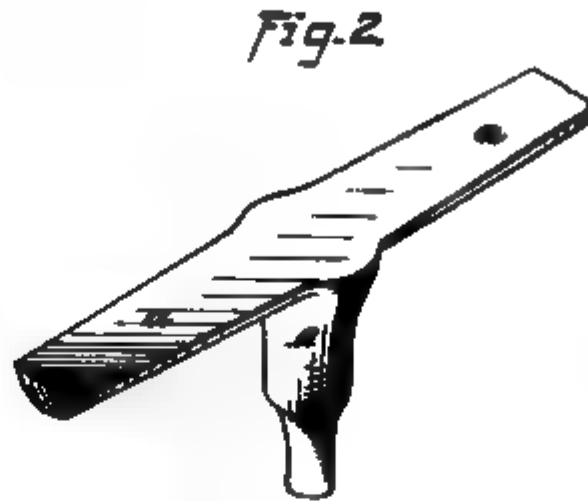
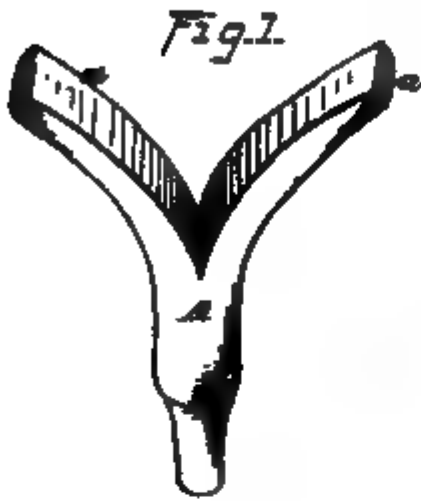


Fig. 3.

Fig. 4.

WITNESSES

Geo. Hutchinson.

Henry C. Hazard.

INVENTOR.

R. B. Miller, by

Prindle & Longfrie Attys.

Statement of the case.

times upon said blank until the latter is caused to conform to and fill said recess and groove, said arms being in a line with each other, as seen in Fig. 2. The blank A is now relieved of its projecting fin by any suitable means, after which it is operated upon by a second set of dies, as follows: A block, D, is provided with a U-shaped cavity, d , within and extending longitudinally across its upper side, and has at the bottom of such cavity a vertical recess, d' , that corresponds to the size and shape of the body of the blank A. From the recess d' a groove, d'' , extends outward and upward within the sides of the cavity d , and has such depth and transverse dimensions and shape as will cause it to conform to the like features of the finished arms a of the blank A, said grooves being increased in width at the bottom of said cavity until they extend upon each side of said recess d' a distance equal to the entire breadth of other portions of said arms. An upper die, E, is provided upon the lower side with a projection, e , which corresponds in shape and size to the cavity d of the die D and fills the same when said dies are brought together. The blank A is taken as it comes from the die B and placed across the cavity d of the die D, the body of said blank being directly over the recess d' , and its arms over and in a line with the grooves d'' , after which the die E is caused to strike one or more blows upon said blank, such operation causing the latter to be bent to the form shown in Fig. 3, and the surplus metal at the point where said arms join said body to be thrown outward and form wings or lips a' . The king-bolt is completed by drawing out the shank A, and by rounding and threading the ends of the clip-arms a , as shown in Fig. 4, any desired or usual means being employed for such purpose.

Having thus fully set forth the nature and merits of my invention, what I claim as new is—

1. The die B b b' and the die C, constructed and combined substantially as and for the purpose shown.
2. The series of dies B, C, D, and E for forming clip king-bolts, substantially as shown and described.

Argument of counsel.

In testimony that I claim the foregoing I have hereunto set my hand this 21st day of February, A. D. 1879.

R. R. MILLER.

Witnesses :

GEO. S. PRINDLE,
MARCUS H. HOLCOMB.

Messrs. O. H. Platt and H. T. Fenton, for appellant :

If the evidence in the cause did not establish the fact, the expressed and implied admissions in the patent are sufficient, that the dies separately are old, the only novelty alleged consisting in their combination. That this is not a patentable combination, but a mere juxtaposition of elements, and not a vital union, must be evident after a reading of the proofs and an examination of the dies. It is quite clear that there exists no *combination* between the forming dies and the bending dies, they are simply used in series; indeed there is an intermediate die, not claimed. The dies may be used a hundred miles apart, or at different periods of time; or two of the former may be used with one of the latter, or *vice versa*. The utility of both is only the separate utility of each. There is no action in concert to produce a result by their united action, but a mere assembling of two old devices. The separate function of each remains the same, and is not controlled by the other when placed together. That this does not require invention is too well settled to be disputed. *Rubber Tip Pencil Co. v. Howard*, 20 Wall. 498 [9 Am. & Eng. 390;] *Reckendorfer v. Faber*, 92 U. S. 347 [10 Am. & Eng. 373;] *Hailes v. Van Wormer*, 20 Wall. 353 [9 Am. & Eng. 340.]

There can be no doubt that both the first and second claims of the reissued patent, read in connection with the amended description, and as construed by the court below, are both of them broader than the claim of the original patent; and that the appellant's dies would not be within the scope and meaning of the original specification or its single claim.

Argument of counsel.

Messrs. J. M. Wilson, Geo. S. Prindle, and Charles R. Ingersoll, for appellees:

To the point made in the assignments of errors that the series of dies claimed by Miller is not a patentable combination, and that separately the dies were old and well known, we answer that it is not true that the dies, separately or in pairs, were old and well known at the time of the issue of Miller's original patent, and there is nothing in the record to support such an averment.

The dies covered by Miller's claim were patentable as a series, and their operation is clearly within the decision in *Forbush v. Cook*, 2 Fish. 668, in which it was held: "To make a valid claim for a combination it is not necessary that the several elementary parts of the combination should act simultaneously. If these elementary parts are so arranged that the successive action of each contributes to produce some one practical result, which result, when obtained, is the product of the simultaneous or successive action of all of the elementary parts viewed as an entire whole, a valid claim for thus combining these elementary parts may be made."

The same ground is covered in many other cases, among which are cited the following: *Herring v. Nelson*, 3 Ban. & Ard. 55; *Hoe v. Cottrell*, 5 Ban. & Ard. 256; *Williams v. R. R. Co.*, 15 O. G. 653.

We submit that neither of the dies shown in Miller's patent were known or used before his invention of the same, but even though one of said dies had been old, as they operate as a series, and by successive steps carry a blank from a rude form to a finished form, they were, so combined, patentable. *Gallahue v. Butterfield*, 10 Blatch. 232.

The claim of the reissued patent is almost identical in form with the original patent and is in no manner expanded. On the contrary, if any difference exists between said claims, the new claim is more limited than the original claim, for the reason that it specifically embraces the plane-faced upper die or drop, while in the original claim such part was not named and only included by implication.

Opinion of the court.

Mr. Justice GRAY delivered the opinion of the court :

This is an appeal from a decree for an injunction and damages for the infringement of a patent issued to Robert R. Miller, on February 22, 1870, and reissued to his assigns on May 6, 1879, for an improvement in dies for forming the clip-arms of king-bolts for wagons. 8 Fed. Rep. 608.

According to the description in the specification, such bolts are made by taking an iron rod of suitable length, splitting it for about two inches at one end, and turning the forks or arms outwards; then heating the rod, placing the body in hole in a block or die grooved to receive the arms, and striking it with a plane-faced upper die, so as to force the arms into and make them take the shape of the grooves, and afterwards placing it between two other dies, which give the arms the proper bend, to fit them to the axletree of a wagon. With the subsequent shaping of the collar and stem of the bolt, this patent has nothing to do.

In the original patent, the patentee stated that he did not claim either of the dies separately, and claimed only "the series of dies" (designating them by letters) "for forming the clip-arms and wings of the lower ends of king-bolts for wagons, said dies being constructed and operating substantially as herein shown and described." In the reissue, he claimed: 1. The first pair of dies, "constructed and combined substantially as and for the purpose shown." 2. "The series of dies" (designated by letters) "for forming clip king-bolts, substantially as shown and described."

The first claim of the reissue is bad, not only because it was for something the patentee had expressly disclaimed in the original patent, but because, as the evidence clearly shows, there was nothing new in the dies themselves.

The second claim of the reissue, like the single claim of the original patent, for the use in succession, or, in the patentee's phrase, "the series," of the two pairs of old dies, the one pair to shape the arms of the bolt, and the other to give those arms the requisite curve, does not show any pat-

Notes and citations.

entable invention. The two pairs of dies were not combined in one machine, and did not co-operate to one result. Each pair was used by itself, and might be so used at any distance of time or place from the other; and if the two were used at the same place and in immediate succession of time, the result of the action of each was separate and distinct, and was in no way influenced or affected by the action of the other. This was no combination that would sustain a patent. *Hailes v. Van Wormer*, 20 Wall. 353 [9 Am. & Eng. 340;] *Pickering v. McCullough*, 104 U. S. 310 [13 Am. & Eng. 238;] *Stephenson v. R. R. Co.*, 114 U. S. 149 [p. 63 *ante*.]

Decree reversed, and case remanded with directions to dismiss the bill.

114 U. S. 524.

Notes:

1. Reissue for matter disclaimed or rejected with patentee's acquiescence, invalid:

Leggett v. Avery, 101 U. S. 256 [12 Am. & Eng. 369.]

Goodyear D. V. Co. v. Davis, 102 U. S. 222 [12 Am. & Eng. 524.]

Eames v. Andrews, 122 U. S. 40.

-
2. Aggregation:

See *Stepenson v. Brooklyn Cross-Town R. R. Co.*, 114 U. S. 149 [p. 63 *ante*,] note.

Patent in suit:

No. 100,053. *Miller, R. R.* February 22, 1870. Reissue
No. 8,694. May 6, 1879. Dies.

Notes and citations.

OTHER SUITS ON SAME PATENT:

Atwater Mnfg. Co. *v.* Beecher Mnfg. Co., 1881. 8 Fed. Rep. 608 ;
12 Reporter, 513.

Cited :

IN SUPREME COURT IN :

Thatcher Heating Co. *v.* Burtis, 1887. 121 U. S. 286 ; Bk. 30 L.
ed. 942.

IN CIRCUIT COURTS IN:

Gunn, Trustee, *v.* Savage, September, 1885. 25 Fed. Rep. 101.
Celluloid Mnfg. Co. *v.* Amer. Zylonite Co., September, 1887. 42
O. G. 961 ; 31 Fed. Rep. 904.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. p. 304.
Walker on Pats. 2d ed. 1889. p. 31.

[illegible]

Syllabus.

JAMES B. CLARK, APPELLANT, v. BEECHER MANUFACTURING COMPANY ET AL.*

115 U. S. 79-87. Oct. Term, 1884.

[Bk. 29, L. ed. 352; 31 O. G. 1169.]

Affirming *Ibid*, 7 Fed. Rep. 816.

Argued April 17, 1885. Decided May 4, 1885.

Particular patent construed, limited, and not infringed.

- † 1. Letters patent, No. 66,130, granted to James B. Clark, June 25, 1867, for an "Improvement in the Manufacture of Blanks for Carriage Thill Shackles," are not infringed by the manufacture of blanks for shackles in accordance with letters patent, No. 106,225, granted to Willis B. Smith, August 9, 1870. (p. 124.)
- † 2. The features of the Clark patent are : that, by dies the arms of the blank are bent into an oblique direction and the body into a curved form, so that the parts where the arms join the body are rounded on the outside as well as the inside ; and that when subsequently the curved body is straightened there will be in it sufficient metal to form sharp outside corners, by being pushed out into them. (p. 134.)
- † 3. The arms of the Smith blank are not bent in an oblique direction, its body is not curved, the parts where the arms join the body are not rounded, either on the inside or on the outside, and, in afterward straightening the back, surplus metal is not pushed toward or into the corners to form them, but the existing corners, already formed, are forced further apart, by driving surplus metal into the back, between the corners. (p. 142.)
- † 4. In view of the state of the art, and the terms of the Clark patent, it must be confined at least to a shape which, for practical use, in subsequent manipulation, has a disposition of metal which causes a sharp corner to be formed in substantially the same way as by the use of his blank. (p. 142.)

* See Explanation of Notes, page III.

† Head-notes by Mr. Justice Blatchford.

Argument of counsel.

Appeal from the Circuit Court of the United States for the District of Connecticut.

The history and facts of the case fully appear in the opinion of the court.

Mr. Wm. Edgar Simonds, for appellant :

There is an allegation in defendant's answer that complainant's patent is anticipated by two prior patents, but only one of those patents was offered in evidence by defendant, and that simply as an illustration of the prior art, bearing upon the construction to be given to complainant's patent ; so that the inquiry in the court below and in this court is confined simply to the question of infringement.

The utility of the complainant's patented improvement is well evidenced not only by defendant's willingness to expend a large sum of money in litigation rather than give up its practice of this improvement, but also by the testimony of Willis B. Smith, defendant's patentee, showing that complainant's improvement went into use through J. B. Savage, complainant's licensee, in 1867, the year complainant's patent was granted, and that twenty-five thousand pairs of shackles per year were made under complainant's patent by this license.

It would seem to be clear and plain that the first claim of the patent in suit is broad enough, by its terms, to cover and include that invention which is shown by the prior art to be that of complainant, to wit, a carriage shackle-blank having an excess of material in the body or back, attained by disposing the metal in that part out of a straight line. It is true that the first claim of complainant's patent mentions the body or back of the blank as "curved," but manifestly any mere change of form in the body or back of the blank, which leaves it with said excess of metal, is *merely* a change of form and nothing more.

The court below states the question of infringement as follows : "It appears that the shape of the two blanks is different. One consists of a series of curves; the other consists

Argument of counsel.

of a series angles. The question of infringement does not depend upon the form of the respective articles. If the straightening of the angularly-bent back of the defendant's blank pushes surplus metal towards the corners so that by means of this surplus, sharp instead of round angles are formed when the arms are bent then the modification of shape is immaterial."

Complainant submits that it is a self-evident proposition that when two iron arches, differing only in the fact that one is made up of curves and the other is made up of obtuse angles, are submitted to precisely the same kind of operating forces, the action of the metal under such forces must necessarily be like and similar, and that though it may differ in the two structures slightly in degree, it cannot differ substantially in kind.

Complainant confidently submits that defendant's blank has this same excess of metal in the body or back, obtained by disposing that material out of a straight line, and that that excess of metal is made available in the final operation for forming the back of a shackle straight and flat from outer angle to outer angle, and that defendant's blank necessarily involves the improvement which complainant has made and patented.

Mr. O. H. Platt, for appellees :

The prior state of the art, as detailed by Mr. Earle, shows that the object sought to be accomplished was to produce a "blank" of such shape and character that, in forming the same into a "shackle," the deficiency of the metal at the outside corners, naturally resulting from bending up the ends of a straight blank, should be so supplied in the operation of bending that the corners of the shackle should be "sharp, full, and square." This had already been accomplished in the Thorp and in the Burns patent.

The description of the invention in the specifications limits the invention to the object and purpose already suggested. We are forced to the conclusion that the only pe-

Opinion of the court.

culiar feature in the complainant's blank which, under his description or claim, and in view of the prior state of the art, is or could be the subject of a patent, is *the curved body and rounded corners, the object of the same being the furnishing of metal to be pushed out to form sharp right-angled corners in the completed shackle.*

If the construction claimed of the complainant's patent be correct, the defendants do not infringe, because: 1. The blank of the defendant, instead of rounded corners at the intersection of the arms with the body, has sharp corners formed in the blank, which are not disturbed in the bending process, but are the identical corners in the finished shackle. 2. The metal in the body of defendant's blank is not pushed out and does not go to form the sharp corners of the completed shackle. 3. The arms are not bent obliquely. Compare complainant's Exhibit Clark's dies and blank and Exhibit No. 1.

From the testimony of Smith and Garvin we reach the conclusion that the distribution of metal in striking up shackles differs in case of the defendant's blank from that which takes place in striking up shackles from the complainant's blank. It was not until the form of the Clark blank had been changed by the addition of stock and practical substitution of angles for rounded corners that marketable shackles with square corners could be produced.

If the complainant's patent were broad enough to cover the making of a flat-backed shackle from a blank having a raised body, and the separation of the angles of the blank by driving its body down between them, we should infringe; but as he has no such patent we do not infringe.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity, brought in the Circuit Court of the United States for the District of Connecticut, by James B. Clark against The Beecher Manufacturing Company, a

Opinion of the court.

Connecticut corporation, and D. F. Southwick, for the infringement of letters patent, No. 66,130, granted to the plaintiff, June 25th, 1867, for an "improvement in the manufacture of blanks for carriage-thrill shackles." The main defence to the suit is non-infringement. The Circuit Court, after a hearing and two rehearings, dismissed the bill, holding that infringement had not been proved. 7 Fed. Rep. 816. The plaintiff has appealed.

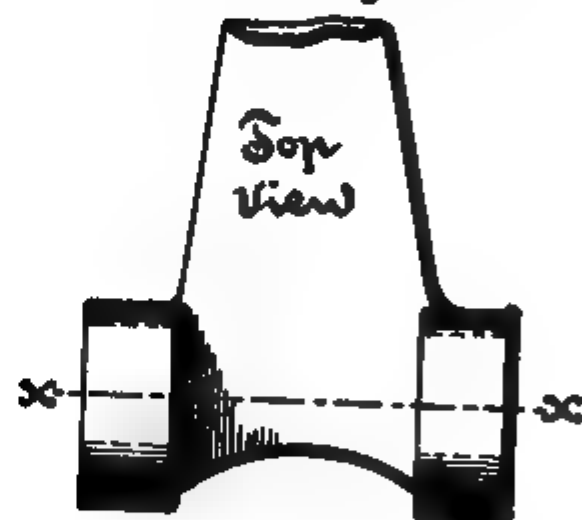
A history of the state of the art, and of the progress of invention in making shackle-blanks will conduce to a determination of the questions involved. A carriage-thrill shackle is a device by which the thrills of a carriage are hinged to the axle. The finished shackle is a horizontal plate, with a pair of vertical ears rising therefrom, one at each end of the back. The cockeye on the end of the thrill is received between the ears, and a bolt passing through the ears and the cockeye secures the parts. The flat back or body part of the article is forged with a projection at each side, forming what is commonly called the "clip," by which the article is secured to the axle. In forming the shackle, it is necessary that the outside corners, where the ears join the back, should be sharp, full and square, to obtain a good bearing on the axle, or the article will not be salable. The old style of shackle was of this shape: [See p. 125.]

It was formed by bending up the two ears from a piece of metal of equal thickness, and the outer corners became round, and the bearing on the axle was not firm and true. It was desirable to obtain in some way, a reservoir or surplus of metal, which could be utilized, in the bending, by being thrown out into or remaining in the corners, to make them full and square on the outside. To attain this result, one James P. Thorp made an invention for which he obtained letters patent, No. 28,114, granted May 1st, 1860, which were reissued to his assignees, H. D. Smith and others, as No. 2,362, September 18th, 1866. Thorp's blank was of the following shape: [See p. 127.]

Fig. 2.

Section

Fig. 1.



J. P. Thorn,

Making Carriage-Couplings,

N^o 28,114.

Patented May. 1, 1860.

Fig 1.

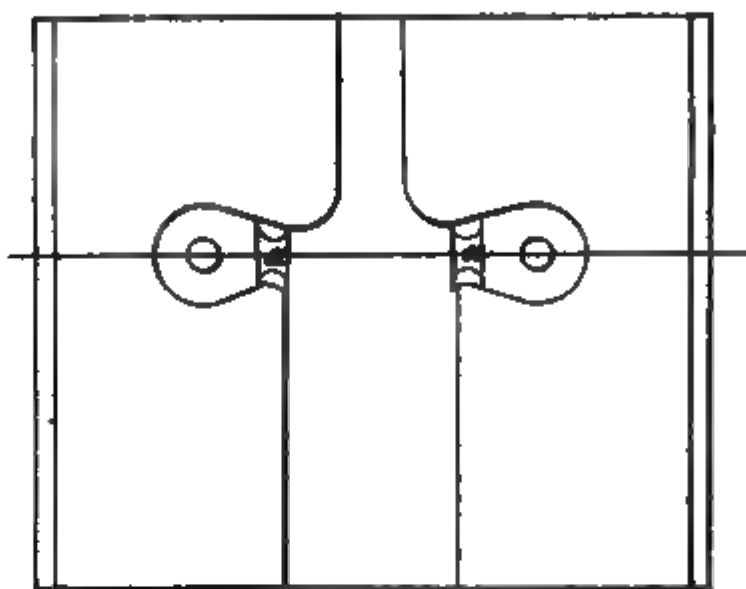


Fig 3

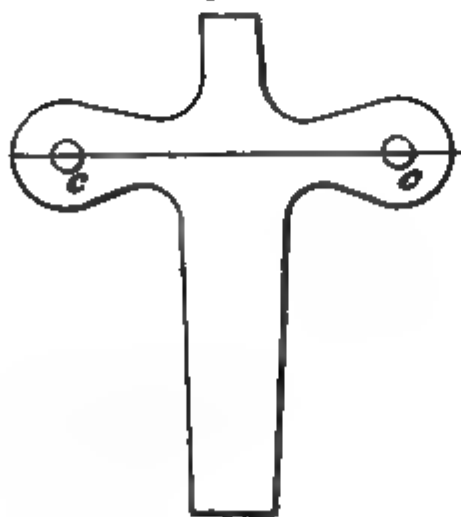


Fig 2

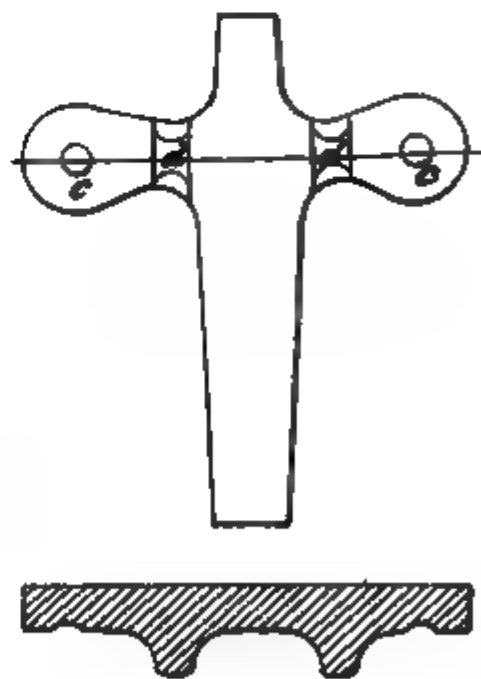


Fig 4

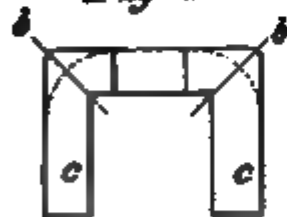


Fig 5



WITNESSES:

*Charles A. Allen
James W. Bays*

INVENTOR:

J. P. Thorn

J. P. Thorn,
Making Carriage-Couplings,
N^o 2,362. Reissued Sep. 18, 1866.

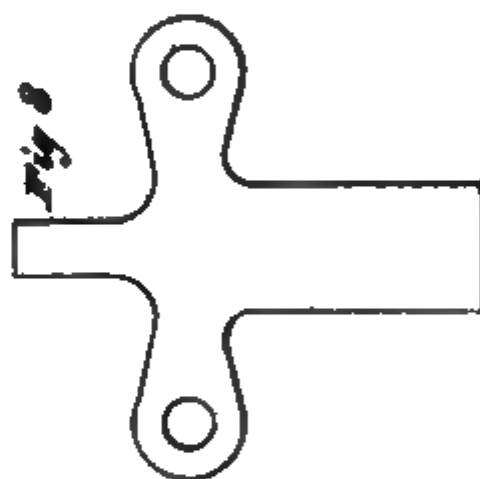
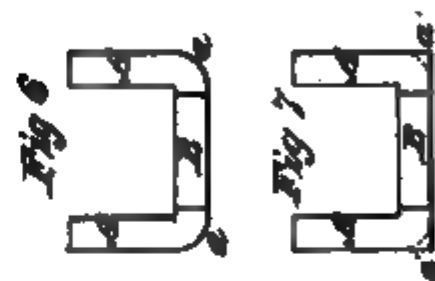
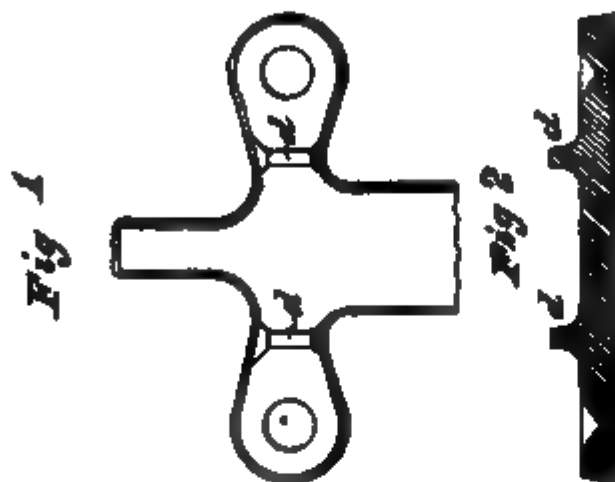


Fig 5

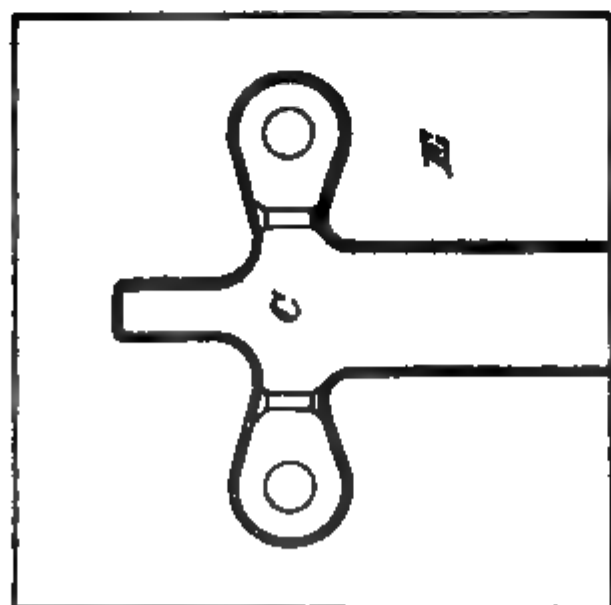


Fig 4

WITNESSES

Edward A. Smith
Barrett & Andrews

INVENTOR:

Ed Smith & Co. Assignees of J. P. Thorn.
By their attorney
R. H. Hardy

L. Burns,
Making Carriage-Couplings,
N^o 65,641. Patented June. 11, 1867.

Fig 2

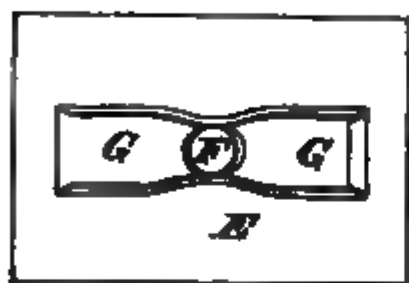


Fig 1

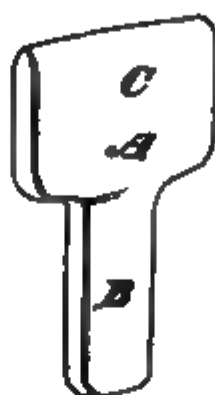


Fig 5



Fig 4

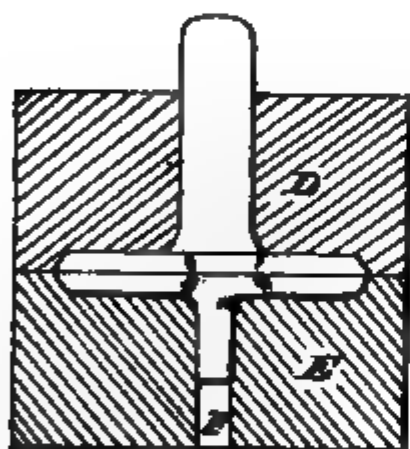


Fig 7

Fig 3

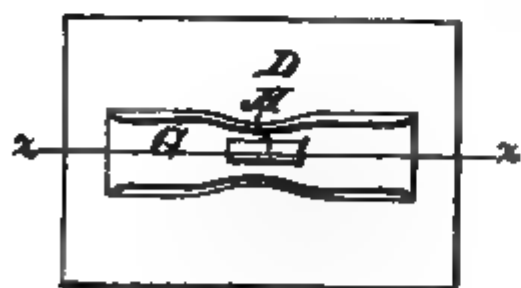
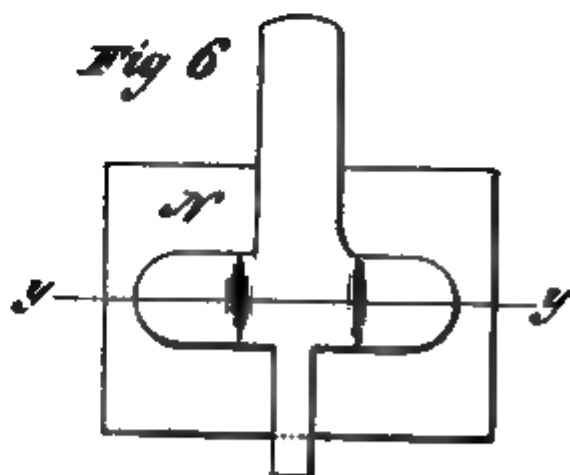


Fig 6



WITNESSES

J. H. Tinsley
J. A. Brown

INVENTOR:

L. Burns
Per Munn & Co
Attorneys

Opinion of the court.

The two projections on the bottom of the blank were intended to furnish sufficient metal to make the outer corners of the shackle square and sharp, when the ears were bent in the direction indicated by the arrows. The projections were at the places where the arms joined the body. Thorp's patent showed a die for making the blank, constructed with recesses or cavities to form the projections, and stated that, after the arms were bent up, the blank, instead of being of the old form, Fig. 6, with rounded corners, *a a*, thus: [See p. 129.] would be of the form of Fig. 7, with square or right-angled corners, *a a*, thus: [See p. 129.] the blank being stronger at the junction of the arms and body, and the expansion of the metal in bending the arm, being compensated for by a diagonal contraction of the metal, which operated to prevent the destruction of the cohesion of the particles of the metal, and the consequent weakening of the blank at the parts where it was bent.

The next step is shown in letters patent, No. 65,641, granted June 11th, 1867, to Leander Burns and Josiah Wilcox, on the invention of Burns. That patent shows, in Fig. 7, an upper die M and a lower die N, and the blank made between them, with square corners, L, L, thus, [See p. 131.] Fig. 7 is a transverse vertical section taken in the plane of the line *y y*, in Fig. 6. Fig. 6 is a face view of the lower die N, and shows also the blank after it is acted on by the dies. The specification states that if the arms of the blank are bent up at right angles, in a direction towards each other, perfect square corners will be left at L, L, with the metal through those corners and the other parts of a uniform thickness.

Then followed the patent to the plaintiff, the specification and drawings [See p. 135] of which are as follows:

"This invention relates to the construction of carriage-shaft shackles from the solid blanks, and to the shape of the dies for forming the same, so that, with the least amount

Opinion of the court.

of labor and power, the said shackle may be gradually formed into the required shape. In the annexed drawings this invention is illustrated. Figure 1 is a vertical sectional view of a shackle-blank, showing it between the dies. Figure 2 is a top or plan view of a shackle-blank, as the same is formed by the dies. Similar letters of reference indicate like parts. The blank, which is made in the shape of a cross, in the usual manner, is placed upon the lower die A, and the upper die B is then forced down upon it, whereby the arms, *a*, *a*, of the blank are bent into an oblique direction, and the body, *b*, is curved, as shown in the figure. The portion of the blank where the arms join the body is rounded, as shown, on both the inside as well as on the outside, the straightening of the body of the shackle pushing out sufficient material for forming the sharp corners, without having any bothersome and impracticable projections. The dies are formed so as to give the blank the required shape. This process of forming shackle-blanks has proved, by practice, to be the most expeditious and simple yet performed, as it requires the least amount of machinery, and forms each part of the shackle with just the required amount and thickness of metal for completing the article."

The claims, two in number, are these: "1. The carriage-shaft shackle-blank, so formed between dies that the body *b*, of the blank is curved, substantially as herein shown and described. 2. The dies A and B, for making the said blank, when so constructed and arranged as to form the rounded corners and the curved body of the said blank, substantially as herein shown and described."

The plaintiff, according to his description, takes a blank in the form of a cross and, by dies of proper shape, bends the arms of the blank into an oblique direction, and the body into a curved form, the result being that the parts where the arms join the body are rounded on the outside as well as the inside; and when subsequently the curved body is straightened, there will be in it sufficient metal to form

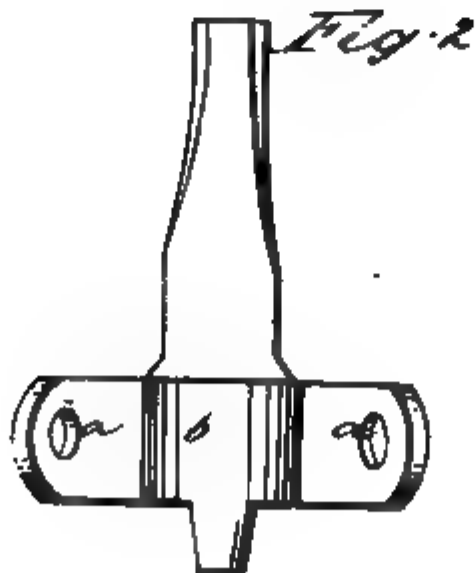
J. B. Clark.

Making Carriage Thill-Couplings.

N^o 66,130.

Patented Jun. 25, 1864.

Figs.



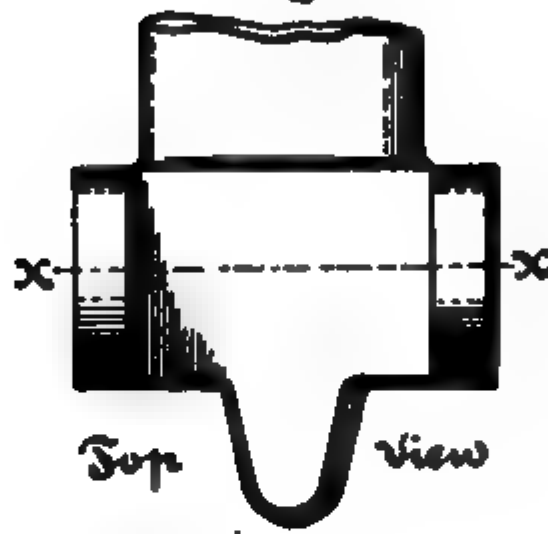
Witnesses

E. Ellsworth
A. M. Towner

Inventor

Jas. B. Clark
Per Munroe & Co
Attorneys

Fig. 1.



Top

view

Fig. 2.

W. B. SMITH.

Making Carriage-Shackle Blanks.

No. 106,225.

Patented Aug. 9. 1870.

Fig. 1

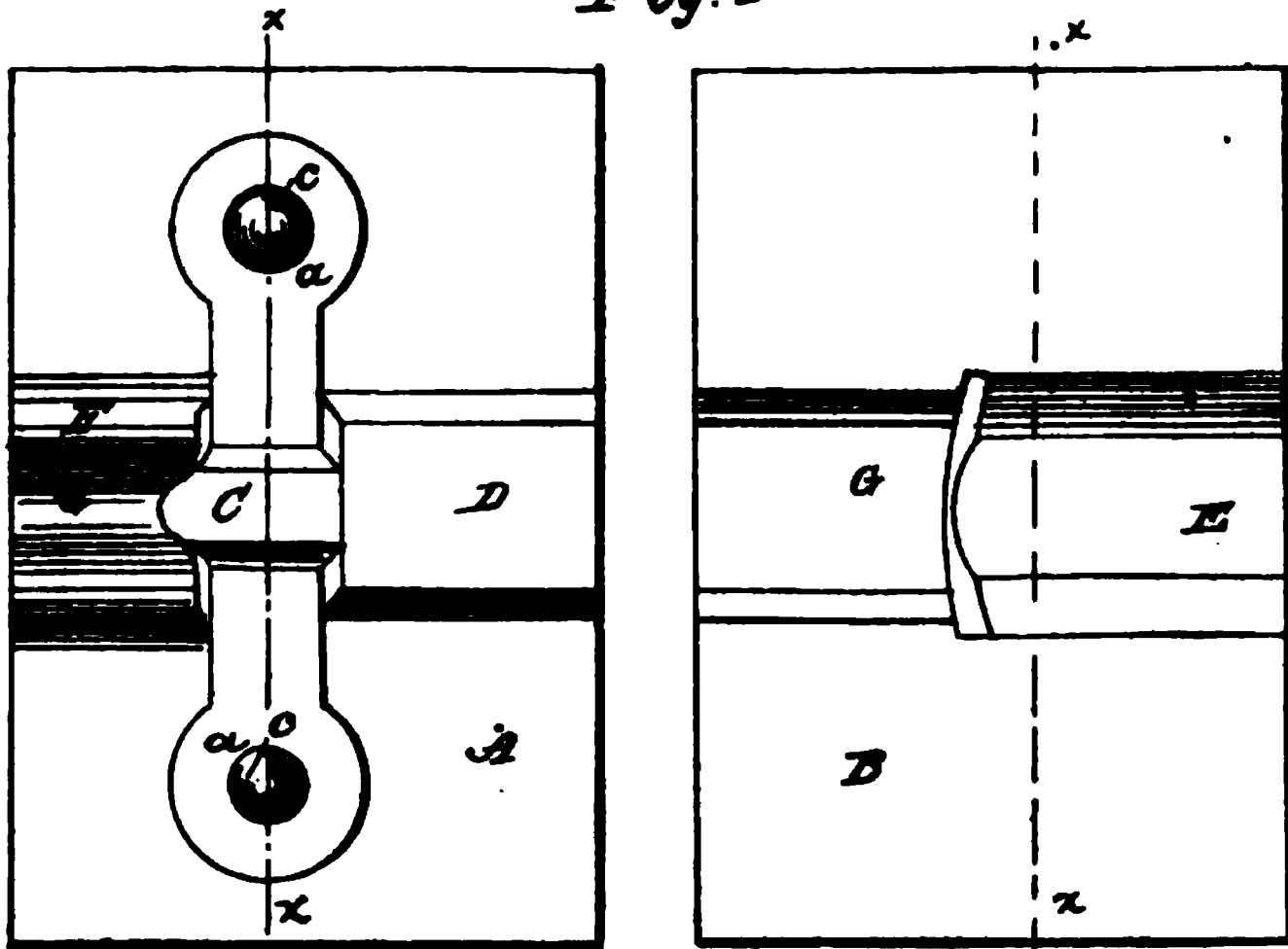


Fig. 2



A.

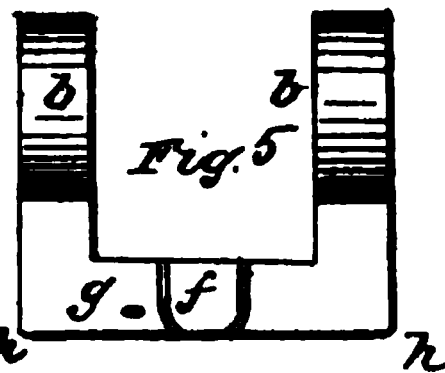


Fig. 3

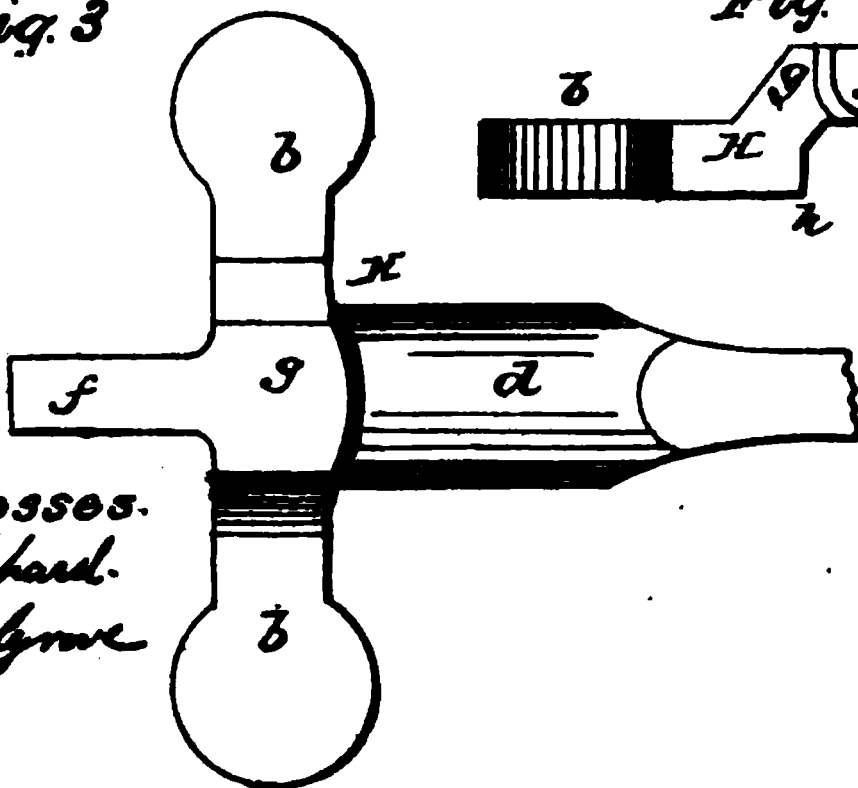
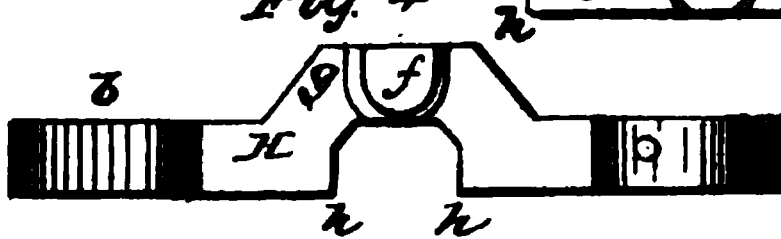


Fig. 4



Witnesses.
C. A. Shepard.
Atty. in law

Inventor
Willis B. Smith.
By James Shepard Atty.

Opinion of the court.

sharp outside corners, by being pushed out into them. The plaintiff's patent stops with the curved blank shown in Fig. 1 of his drawings. That blank is, in practice, afterwards formed, by other dies, into the following shape: [See p. 137.] Putting the blank into that shape is what the specification refers to when it speaks of "the straightening of the body," and "forming the sharp corners."

The defendants make shackle-blanks by dies, under letters patent, No. 106,225, granted to Willis B. Smith, August 9th, 1870. [See p. 139.] Fig. 3 of that patent is a plan view of the blank which the dies forge, and Fig. 4 is an end view of the blank. In these figures, *b, b*, are the ears; *d* is the clip; *f* is the shaft; *g* is the body of the blank; *h, h*, are the corners at the junction of the ears and the body; *H* is the whole blank. The corners *h, h*, are formed at right angles to each other. The specification says, that the blank *H* is then placed in a trimming die, and the surplus metal which projects from its edges is removed; and that the blank is then heated, and the oblique portions of the body, *g*, are bent, so as to throw the ears, *b, b*, upward, in the form shown in Fig. 5, in which operation the corners, *h, h*, previously formed at right angles, remain unmolested, and are square and full. The specification says: "I am aware that dies for the same purpose have been previously used, as shown in the patents to L. Burns, June 11, 1867, and J. B. Clark, June 25, 1867. In Burns' dies, the body of the shackle is formed straight, while the ears are curved, the curve commencing at the plane where the ears are to be bent to form the corners, and therefore said corners are not right-angled, neither is it possible for curved ears to be both on one and the same line. In Clark's dies, the ears are formed straight, but were arranged on different lines, so that the edge of the blank at the side of each ear was thrown out of a vertical line, which seriously interferes with trimming off the surplus metal. I make no claim to either of the above or similar dies." Smith's patent claims the blank so constructed and formed, and also the dies for forging it.

Notes and citations.

The Circuit Court was of the opinion that in straightening the angularly bent back of the defendants' blank, to get it into the shape of Fig. 5 of the Smith patent, surplus metal was not pushed towards or into the corners to form them, but the existing corners were forced further apart, to the extent of one-fourth of an inch, by driving surplus metal into the back, between the corners.

We are of opinion that this view is correct. Besides this, the arms of the defendants' blank are not bent in an oblique direction, its body is not curved, and the parts where the arms join the body are not rounded, either on the inside or on the outside. The defendants' blank, as in Fig. 4 of the Smith patent, has abundance of material near the corners *h, h*, which are to be sharp and square and are already formed, while the plaintiff's blank, by reason of its rounded corners, has a deficiency of material near the points where the square corners to be formed are to be.

In the efforts to make, by dies, a shackle-blank, which should ultimately have sharp outside corners, the inventors, in succession, had the idea of a reservoir or surplus of metal. Thorp had it in the downward projections. Burns had it in his sharp lower corners with curved arms. The plaintiff had it in his curved body and rounded corners. Smith has it in his shape. But, in view of the state of the art, and the terms of his patent, the plaintiff must be confined to a curved body, rounded corners, and oblique arms, or, at least, to a shape which, for practical use, in subsequent manipulation, has a disposition of metal which causes a sharp corner to be formed in substantially the same way as by the use of his blank. The defendants' blank does not have such a shape.

Decree affirmed.

115 U. S. 86-87.

Notes :

Where form is of the essence of the invention, change of form is no infringement :

Notes and citations.

Carver v. Hyde, 6 Pet. 513 [4 Am. & Eng. 367.]

Metropolitan Washing Machine Co. v. Tool Co., 20 Wall. 342 [9 Am. & Eng. 305.]

Keystone Bridge Co. v. Phœnix Iron Co., 95 U. S. 274 [11 Am. & Eng. 364.]

Werner v. King, 96 U. S. 218 [11 Am. & Eng. 419.]

Form—when infringed :

Winans v. Denmead, 15 How. 330 [6 Am. & Eng. 107.]

Patent in suit :

No. 66,130. **Clark, J. B.** June 25, 1867. **Manufacture of Blanks for Carriage-Thills.**

OTHER SUITS ON SAME PATENT :

Clark v. Beecher Mnfg. Co., 1881. 7 Fed. Rep. 816.

Syllabus.

JOHN F. WOLLENSAK, APPELLANT, v. FRANK A. REIHER.*

115 U. S. 87-96. Oct. Term, 1884.

[Bk. 29, L. ed. 355; 31 O. G. 1303.]

Argued April 14, 15, 1885. Decided May 4, 1885.

Particular patent construed, limited, and not infringed.

1. Reissued letters patent, No. 9,307, John F. Wollensak, July 20, 1880, (original No. 136,801, March 11, 1873,) for an Improvement in Transom-Lifters, which described broadly, "any construction, combination, or arrangement of parts which shall support the long or operating rod" for the purpose specified; *held*, that in view of the state of the art the claim must be regarded as a narrow one, and limited to the particular combination described, and not infringed by the defendant's, F. B. Reiher's, device, secured to him by letters patent, No. 226,353, April 6, 1880, Transom-Lifter, satisfactorily shown by expert testimony to differ from Wollensak's device in that, proceeding from a different point in the state of the art it presents a different structure operating upon a totally different principle. (p. 147.)

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The history and facts of the case appear in the opinion of the court.

Messrs. L. L. Bond, Ephraim Banning, and Thomas A. Banning, for appellant:

It seems clear, when the patent is properly considered in relation to its own admissions as to the prior art, and the prior art as shown, that the court erred in holding that the patent did not disclose or cover a patentable invention.

As a general proposition, the only difference between the devices of the appellant and the appellee, so far as appel-

*See Explanation of Notes, page III.

Argument of counsel.

lant's patent is concerned, is *the difference between prolonging the handle rod and prolonging the upper guide*. The point of supporting the handle rod above the bracket of the lifting arm was worked out by the appellant. This problem being solved, it would occur to any good mechanic that there might be several ways of doing it, and the first and most obvious way of doing it by a modification would be to prolong the guide and slot it, so that the bracket by which the lifting arm is attached to the rod could pass along the slot of the guide.

The bracket through which the lifting arm is attached to the rod, and by which the rod connection is made, are almost identical in both devices. Wollensak's lifter is provided with an anti-friction roller; Reiher's is provided with a runner, or slide, having its ends rounded.

Whatever differences there may be between the two are mere *matters of addition* upon the part of the appellee, and are not matters of substitution or variation of the parts put in combination by the third claim of the appellant's patent.

The law is well settled that matters of addition do not avoid infringement.

Curtis on Pats., § 311; Bates v. Coe, 98 U. S. 42 [12 Am. & Eng. 150.]

Messrs. Wm. A. McKenney and Charles T. Brown, for appellee:

In considering this case we must carefully consider the nature of the complainant's improvement, and the seemingly small benefit to be derived from what has been added to an old and well-known device (as to this there is no question, as the complainant so describes it) which improvement seems within the practical knowledge of any skilled workman or mechanic.

Admitting all that complainant says concerning the date of his invention, by his own specification, the state of the art at the time of complainant's invention was a transom lifter in all respects precisely similar to that described in

Opinion of the court.

the third claim of complainant's patent excepting the guide, G', and the prolonged rod, U.

So far as complainant's patent is concerned, defendant's upright rod and lifting arm are identical with the old upright rod and lifting arm, defendant has placed upon the upper end of this lifting arm a slotted guide. This he certainly had a right to do. He had the same right to start from the common ground, the old form of transom lifter, as had the complainant. And so long as he left to complainant his prolongation of the upright rod, that being named as one of the necessary elements in complainant's combination, so long he did not trench upon the complainant's rights.

Although patentees are entitled in all cases to invoke to some extent the doctrine of equivalents, to protect themselves against mere formal alterations or substitutions, they are never entitled to do so in any case to suppress all other substantial improvements.

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290 ;] *Blanchard v. Putnam*, 3 Fish. 186 ; *Murray v. Clayton*, L. R. 7 Ch. 570.

It would seem from earlier cases that the doctrine of equivalents is applied in a broader and more liberal manner in favor of one who has discovered a result or function that is new, as well as the machinery that produces, than it is in favor of one who has simply made an improvement in the manner of bringing about a known result.

McCormick v. Talcott, 20 How. 402 [6 Am. & Eng. 410 ;] *Singer v. Walmsley*, 1 Fish. 558 ; *Burden v. Corning*, 2 Fish. 487.

Mr. Justice MATTHEWS delivered the opinion of the court :

The bill in equity was filed by the appellant to restrain the alleged infringement by the defendant, of reissued letters patent, No. 9,307, dated July 20, 1880 ; the original patent, No. 136,801, dated March 11, 1873, having been issued

Opinion of the court.

to John F. Wollensak, the appellant, for an alleged new and useful improvement in transom-lifters. This appeal is from a decree dismissing the bill for want of equity.

The specification and drawings of the patent are as follows :

“ Figure 1 is a perspective view, showing one means for carrying my invention into operation. Fig. 2 is a side elevation of the same, and Fig. 3 is a detached sectional view.

“ Similar letters of reference in the several figures denote the same parts.

“ Transom-lifters have heretofore been constructed with a long upright rod or handle jointed at its upper end to a lifting-arm which extends to and is connected with the side or edge of the transom-sash, the sash being opened or closed by a vertical movement of the long rod. When thus constructed the upright rod is liable to be bent by the weight of the transom, owing to the want of support at or near the point of junction between the long rod and the lifting-arm.

“ The object of my invention is to remedy this difficulty ; and to such end it consists in providing the proper support, or support and guide, for the upper end of the lifting-rod during its vertical movements and while at rest.

“ This may be accomplished in a variety of ways, one of which I will now proceed to describe in detail, although I wish it clearly understood that I do not limit my invention to this construction, but regard it as covering broadly any construction, combination, or arrangement of parts which shall support the long or operating rod and prevent it from being bent or displaced by the weight of the transom.

“ In the drawings, D is the door ; T, the transom-sash, pivoted at top, bottom, or middle, as preferred ; A, the lifting-arm that connects the sash to the upright rod ; U, the upright rod, passing through two guides, G G', one above and one below the point of junction with the lifting-arm ; R, a friction-roller, secured to the lifting-rod so as to bear against the wall and support said rod at its point of junction

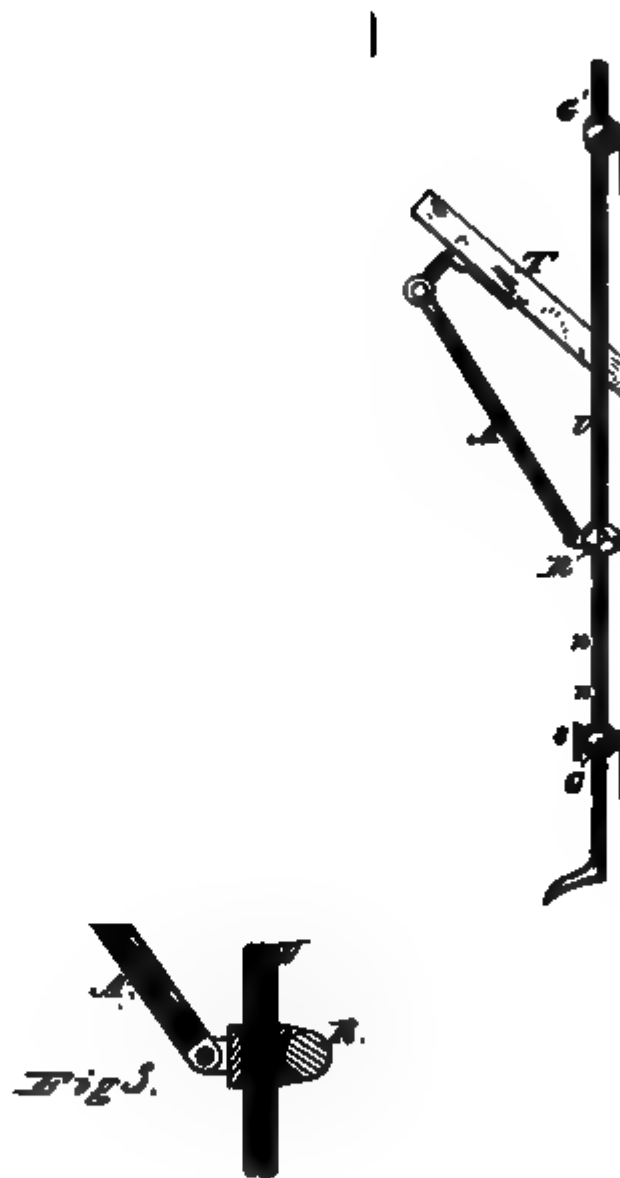
J. F. WOLLENSAK.
Transom Lifter.

No. 9,307.

Reissued July 20, 1880.

Fig. 1.

Fig. 2.



WITNESSES

Harry King
William Blackstock.

By

INVENTOR

John F. Wollesak
Lo. Hill,
his Attorney.

Opinion of the court.

with the lifting-arm ; *n, n*, notches, cut in the upright rod to receive the end of the set-screw ; and *s*, a set-screw arranged, in connection with the lower guide and the rod U, so as to be convenient of operation for the purpose of fixing the transom at any required angle. The upright rod is thus supported at three points, to wit, above, below, and at the joint where it sustains the weight of the transom. It can also be adjusted and securely fastened so as to open the sash as much or as little as may be desired, and to lock it in that position.

“ Having thus described my invention, what I claim as new is—

“ 1. The combination, with a transom, its lifting-arm and operating-rod, of a guide for the upper end of the operating-rod, to prevent it from being bent or displaced by the weight of the transom.

“ 2. The roller R, arranged at the junction of the lifting-arm A and upright rod U, in a transom-lifter, substantially as and for the purpose described.

“ 3. The guide G', arranged above the junction of the lifting-arm and upright rod, in combination with the prolonged rod U, the guide G, and arm A, substantially as and for the purpose specified.”

The defences relied on were, that the alleged invention was not patentable ; that it had been anticipated by Bayley and McCluskey, to whom a patent had been granted, dated July 7, 1868, No. 79,541, for an improvement in railroad-car ventilators ; and that the defendant's device, secured to him by a patent dated April 6, 1880, No. 226,353, did not infringe that of the appellant.

The specification and drawings of the appellee's patent are as follows :

“ My object is to construct a lifter which will always be ready for use and answer equally well for all kinds of transoms, no matter how the same may be hinged, without exchanging or altering any of the parts, in a simple and durable manner.

Opinion of the court.

“In the drawings forming part of this specification, Figures 1 and 2 show a front view and side elevation of my lifter attached to a transom hinged below. Figs. 3 and 4 show the lifter for transoms hinged above. Fig. 5 shows a front view of the lifter attached to a ventilating opening hanging obliquely. Fig. 6 shows the lifter attached to a transom hinged sidewise. Fig. 7 shows the lifter attached to a skylight. Fig. 8 shows a front view, Fig. 9 a vertical longitudinal section, and Fig. 10 an inverted plan, of the casing. Figs. 11 and 12 show the top of lifting-rod with adjusting-block. Fig. 13 shows the lower part of the lifting-rod with handle attachment.

“Like letters of reference indicate like parts.

“The casing A, which is screwed to the door-frame, is provided on the front plate with a long slot, *a*. Sliding loosely up and down in this casing, A, is the adjusting-block B, which protrudes by the ear *b*, forming part of this block, through slot *a*. Affixed to block B is the lifting-rod C, in such a manner as to allow the rod to turn in said block. For this purpose the block is provided with a wide slot, as shown in Figs. 9 and 12, into which fits loosely the pin *d*, which penetrates the rod C.

“Attached to the transom in a position which is regulated by and depends upon the manner of hinging the same, at about midway between the outer swinging point and the center of hinge, is the bracket or loop D. Attached to this loop is the connecting link or arm E, which connects at its other end to the ear *b* of the adjusting block.

“A look at the drawings will show that the upward or downward movement of the adjusting-block, caused by the respective movement of the lifting-rod, will be followed by a swinging movement of the transom on its hinges, through the agency of the universal link or arm E.

The inner face of the casing A (shown in Fig. 9) is provided with a series of notches, *e*. The upper end of the rod C is provided with a spiral spring, F, which, resting at one

F. A. REIHER.
Transom-Lifter.

No. 226,353.

Patented April 6, 1880.

Fig. 1

Fig. 3



WITNESSES:
J. C. Wilke
at Chaim

INVENTOR:
Frank A. Reiher

F. A. REIHER.
Transom-Lifter.

No. 226,353.

Patented April 6, 1880.

Fig. 6

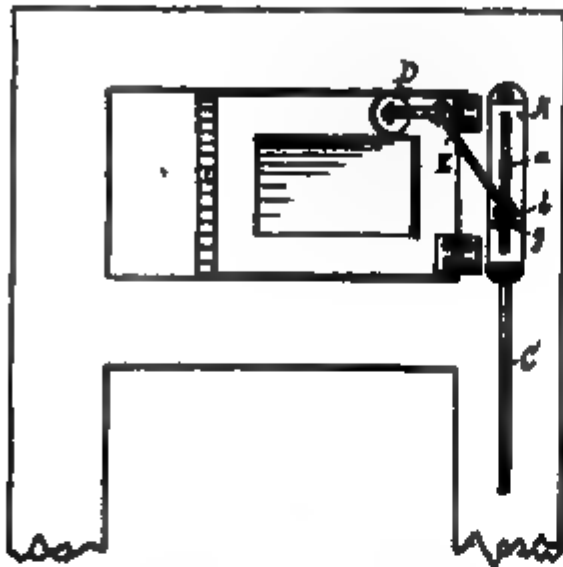


Fig. 7



Fig. 8

Fig. 9

Fig. 10



Fig. 12

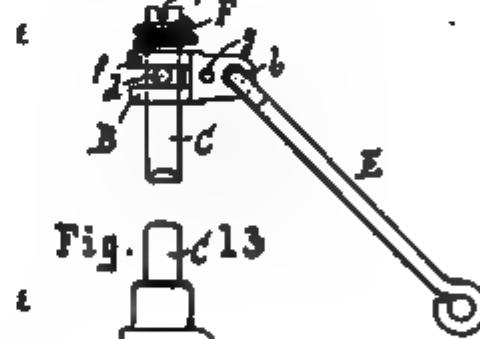


Fig. 13



WITNESSES:

J. C. Wilke
A. Chaim

INVENTOR:

Frank A. Reiher

Opinion of the court.

end in the hole f of the adjusting-block B, is affixed at its other end in a groove, f' , at the top of rod C. This spring F has the tendency to hold the rod C, which turns loosely in the block B, in such a position as to cause the pin d , which projects on both sides of the block B, to fall into one of the notches e provided in the casing. Thus the rod, with block B and universal link E, is held in place by the action of spring F and pin d , and can be moved only by turning the rod C slightly on its axes, so as to disengage the pin d from the notch e .

“ It will be seen that, whenever the hand of the operator should happen to loose its hold upon the rod, the spring F will cause the pin d to fall into the next notch and arrest the further movement of the block B, and thereby the movement of the transom. The transom may thus be locked at any desired position.

“ The rod C is provided at its lower end with handle H, arranged with an opening for the finger, so that the rod may be with convenience turned and lifted or lowered at will.

“ For transoms hinged at the lower edge of the frame (shown in Fig. 1 and 2) the transom with loop D hangs in the universal link E. The casing A with adjusting-block is fixed above. When operating the same, the block bears with its shoulders h upon the inner face of casing A.

“ For transoms hinged at the upper frame, as shown in Figs. 3 and 4, the casing is fastened below, so that the adjusting-block may be held by the lowest notch e . While the transom is closed, the universal link hangs downward from the loop D. In this case, when operated, the bearing between block and casing is reversed, and is taken up by a pin g , penetrating through the ear of the block and resting upon the outer face of the casing A.

“ For oblique transoms the lifter is affixed as shown in Fig. 5. Fig. 6 shows a transom hinged at the side. The casing or lifter is affixed vertically at the hinged side, the adjusting-block being in the highest notch when the transom is closed.

Opinion of the court.

“For transoms hinged in the middle, the lifter may be affixed either above or below the hinged center. For skylights, the lifter is affixed as shown in Fig. 7.

“It will be seen that the universal link E, with its two swiveling loop ends, will always be ready to form a connection between the transom-loop D and the ear *b* of the adjusting-block, no matter which way the transom may be hinged.

“What I claim as my invention, and desire to secure by letters patent, is

“1. The casing A, with slot *a*, containing the adjusting-block B, with upright rod C, in combination with chain-link E and loop D, all arranged and constructed in the manner as shown, and for the purpose specified.

“2. The adjusting-block B, rod C, pin *d*, and spring F, in combination with casing A, provided with slot *a* and notches *e*, *e*, for the purpose set forth.”

The specification of the complainant's patent undertakes broadly to describe the invention, intended to embrace in it, as “any construction, combination, or arrangement of parts which shall support the long or operating rod and prevent it from being bent or displaced by the weight of the transom.” But, having reference to the state of the art at the date of the alleged invention, and the claims of the patent, the patentee must be limited to the combination, with a transom, its lifting-arm, and operating-rod, of a guide for the upper end of the operating-rod prolonged beyond the junction with the lifting-arm, so as to prevent the operating-rod from being bent or displaced by the weight of the transom.

Putting by the question whether this is a patentable invention, in view of the existing state of the art, the claim must be regarded as a narrow one and limited to the particular combination described. In that view, the defendant's arrangement is no infringement. The difference between the two devices is pointed out, and, as we think,

Opinion of the court.

satisfactorily, by Mr. Dayton, an expert witness on behalf of the defendant. He says: "When the sash is opened in the Reiher transom not an ounce of its weight falls upon, either laterally or obliquely, the upright rod. The Reiher transom is provided at its lower end with a block which runs in a guide, and which is so constructed, with inner flanges and an external pin, arranged to bear respectively upon the inner and outer faces of the slotted guide which he employs, and which is fixed on the frame, as to receive all the pressure resulting from the weight of the transom. The handle or the long upright rod in the said Reiher transom is designed and serves wholly as a means of reaching the foot of the lifting-arm and pushing it upward or drawing it downward. As I before stated, not a particle of inward or lateral pressure falls upon the end of this rod by reason of the weight of the transom. In my judgment, such upright rod may, for this purpose, as well be absent as present. I stated that the sole purpose of the long upright rod was to reach and lift the foot of the block with the end of the lifting-rod. To be accurate, I also state that it serves, additionally, to operate a novel locking device with which said foot-piece of the lifting-arm is provided.

So far, then, as the function of the guide G' in the Wollensak patent, or the upper guide in the numbers 1 and 3 of the Wollensak transom model, is concerned, I find that the Reiher transom presents a totally different structure, operating on a totally different principle, from that exhibited in the Wollensak transom model.

In my judgment the improvements of Mr. Reiher, as exemplified in the Reiher transom exhibit, are based upon and proceed from a totally different point in the state of the art of transom-lifters, from that admitted to be old in the passage quoted from Wollensak's patent specifications, and upon which Wollensak's improvements are based. It is a matter of common knowledge, I believe, and it is certainly within my personal knowledge, that transoms or flap win-

Notes and citations.

dows were, long prior to the date of Wollensak's original patent, provided with a pivoted brace, the foot of which was movable against the frame of such window or door. This is precisely the point in the art to which Mr. Reiher in his transom-lifter has applied his improvements. His improvements do not involve the removal of the weight of the transom from a direct bearing against the frame at the foot of the lifting-arm, and have not that object. Mr. Reiher sought, evidently, only to provide a ready locking device by which the foot of the lifting-arm may be secured at any point quickly, and by which he may at once reach the locking device and lift the transoms through the medium of the long upright rod. Said long upright rod in his case is not, therefore, made stronger or weaker with a view to prevent its bending, and is only strong enough in any case to enable him to push up the foot of the lifting-arm, and, by rotating the rod, to unlock his novel fastening device. There was no fault in the old structure upon which Mr. Reiher has made his improvements like that assigned to the old device upon which Wollensak has improved, namely, the bending of the vertical rod having a lifting-rod connected therewith, because said lifting-arm did not, in the old device attacked by Reiher, have any vertical rod at all, and because the lifting-arm distinctly bore against the frame instead of against the rod."

It follows that the decree of the Circuit Court, dismissing the bill for want of equity, was correct. *It is accordingly affirmed.*

115 U. S. 95-96.

Patent in suit:

No. 136,801. Wollensak, J. F. March 11, 1873. Reissue No. 9,307, July 20, 1880. Transom-Lifter.

OTHER SUITS ON SAME PATENT:

Wollensak v. Sargent, 1888. 33 Fed. Rep. 840.

Wollensak v. Sargent, 1890. 41 Fed. Rep. 53.

Oct., 1884.] WOLLENSAK v. REIHER.

Oct., 1884.] WOLLENSAK v. REIHER.

161

Notes and citations.

Cited :

IN CIRCUIT COURTS IN :

Wollensak v. Sargent, February, 1888. 33 Fed. Rep. 840.

Wollensak v. Sargent, January, 1890. 41 Fed. Rep. 53.

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Syllabus.

JOHN F. WOLLENSAK, APPELLANT, v. FRANK A. REIHER.*

115 U. S. 96-102. Oct. Term, 1884.

[Bk. 29, L. ed. 350.]

Affirming *Ibid*, 22 Fed. Rep. 651.

Argued April 14, 15, 1885. Decided May 4, 1885.

Particular reissued patent. Multiplication of reissue claims. Unreasonable delay in reissuing. Expanded reissue claims. Laches in reissuing, a question of law.

1. Where original letters patent, No. 148,538, J. F. Wollensak, March 10, 1874, Transom-Lifter, which contained but two claims, was reissued after a delay of more than five years as No. 10,264, December 26, 1882, with seven additional claims, and it was of these that infringement was alleged, *held*, that admitting that the added claims were embraced by the original specification, nevertheless an inspection of the patent when issued would have informed the patentee that it failed to cover the area of his invention ; and his failure to improve this opportunity with reasonable diligence, constitutes laches, and disables him in equity from enforcing his right to the detriment of those who have thereby been led to act as though it were abandoned. (p. 168.)
2. The averment in the bill that complainant had presented to the Patent Office a full statement of the facts connected with the delay in securing their reissue, and that the Examiner-in-Chief had decided that he had satisfactorily explained the delay and was entitled to reissue, is not enough. The Patent Office expressly or implicitly decides the question of diligence in every case of reissue ; but the very question for judicial review is whether the Patent Office has decided rightly, and the special circumstances held to have excused the delay should have been set out. (p. 170.)
3. The settled rule is, where the claim is merely expanded, that a

*See Explanation of Notes, page III.

Argument of counsel.

delay for more than two years in applying for reissue, invalidates the reissue, unless such delay is accounted for and excused by special circumstances. (p. 171.)

4. When the injunction bill set out both the original and the reissued patent, and it appears from inspection that the sole object of the reissue was to enlarge or expand the claims of the original, and that a delay of two or more years, has taken place in applying for the reissue, not explained by special circumstances showing it to be reasonable, the question of laches is a question of law arising on the face of the bill, which avails as a defence upon a general demurrer for want of equity. (p. 171.)

[Citations in the opinion of the court:]

Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303.] p. 169.

Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322.] p. 170.

Beaubien v. Beaubien, 23 How. 190. p. 172.

Stearns v. Page, 7 How. 819. p. 172.

Moore v. Greene, 19 How. 69. p. 172.

Marsh v. Whitmore, 21 Wall. 178. p. 172.

Godden v. Kimmell, 99 U. S. 201. p. 172.

Badger v. Badger, 2 Wall. 87. p. 172.

Wood v. Carpenter, 101 U. S. 135. p. 172.

Lansdale v. Smith, 106 U. S. 391. p. 172.

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The history and facts of the case appear in the opinion of the court.

Messrs. L. L. Bond, Ephraim Banning, and Thomas A. Banning, for appellant :

In reference to the time when a reissue can be had, this Court in *Wilson v. Rousseau*, 4 How. 688 [4 Am. & Eng. 436,] held as follows : “ That the Commissioner of Patents can lawfully receive a surrender of letters patent for a defective specification, and issue new letters patent upon an amended specification, *after the expiration* of the term for which *the original patent was granted*, and pending the existence of an extended term of seven years ; and that

Argument of counsel.

such surrender and renewal may be made *at any time* during such extended term."

We do not understand that the law, as stated by the courts, has been changed by the recent decisions, commencing with *Miller v. Brass Co.*, 104 U. S. 350 [13 Am. & Eng. 303,] and at this time ending with *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322,] that any attempt to change the law has been made except by the introduction of the equitable doctrine of laches, nor has this court reversed its decision in *Wilson v. Rousseau*, 4 How. 646 [4 Am. & Eng. 436,] where it held unanimously that the words of the statute: "Whenever any patent is inoperative or void by reason of a defective specification," meant that the discovery might be made and the patent reissued at any time up to the last day of its existence, and after an extension.

In this case, although a bill was filed, and the case decided before the decision in *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322,] an attempt was made to explain the delay, yet the court being of the opinion that two years was an absolute bar and a forfeiture of all right to any additional claim, sustained the demurrer and dismissed the bill, as will be seen, principally upon this ground. Under the authorities, we think it clearly appears that the court below erred in dismissing appellant's bill.

The decision of the Commissioner is at least *prima facie* correct, and cannot be reviewed or set aside without proof showing it to have been wrong.

As said by Justice Miller, if "the delay defeated the right to the reissue, this was a matter into which the Patent Office should enquire. The duty to do so devolved on it, and the right to decide it necessarily followed. * * *"
Mahn v. Harwood, 112 U. S. 366 [15 Am. & Eng. 322.]

Now if the delay can be explained, and it is the duty of the Commissioner to inquire and decide in reference to it, it would seem to follow, as a matter of course, that this decision shall be considered as at least *prima facie* correct. As said by Justice Woods, in reference to the extension of a

Argument of counsel.

patent, "while the decision of the Commissioner of Patents is not entitled upon this question to the force of *res adjudicata*, yet is a determination entitled to the highest respect of the courts, and should not be reversed except upon the most satisfactory proof." *Cook v. Ernst*, 5 Fish. 406.

And in *Spaeth v. Barney*, 30 O. G. 997, where the delay was more than seven years and a half, and no excuse was shown to have been offered, Judge Colt, overruling a demurrer to the bill said * * * It is also presumed that the Commissioner acted within his authority under the statute until the contrary is proved."

Messrs. Wm. A. McKenney and Charles T. Brown, for appellee:

The general principles of equity jurisprudence control in patent cases, and the question of laches can be raised by demurrer, and is a good defence to a bill in equity. *Walker on Pats.* § 597; *McLean v. Fleming*, 96 U. S. 257; *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322.]

The complainant admits that the reissue was obtained for the purpose of broadening the claims to cover the invention actually made, though not claimed.

Defendant contends that a period of eight years between the issuing of the original and the reissue shows such laches as to require explanation in the bill on the part of the complainant; and defendant claims the public became possessed of all invention, if any there was, in the original patent, not specifically set out in the claims, and the failure to claim dedicated the same to the public, immediately on the issuing of the original patent. And complainant was bound to exercise the greatest vigilance to inspect his patent and if the claims were insufficient, to surrender the same and obtain reissue.

Whatever is well described in the patent is patented, that is, made patent to the public, whether it is claimed by the patentee or not. *Walker on Pats.* § 55.

Whether the application for a reissue patent is made in

Opinion of the court.

reasonable time is a matter of law, which the court may determine by comparing the reissue patent with the original, and if necessary, with the records in the patent office when presented by the record. *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322.]

In the case at bar, both the original and reissue were before the court, and hence, all the questions involved could be and were raised by demurrer.

Mr. Justice MATTHEWS delivered the opinion of the court :

This is a bill in equity to restrain by injunction the alleged infringement by the defendant below of reissued letters patent, No. 10,264, issued to the complainant December 26th, 1882, upon the surrender of original letters patent, No. 148,538, dated March 10th, 1874, granted to the complainant for a new and useful improvement in transom-lifters. There was exhibited with the bill, as parts thereof, copies of the original and reissued letters patent. The defendant demurred to the bill for want of equity ; the demurrer was sustained, and the bill dismissed. From that decree this appeal was taken.

The original patent was confined to two claims, which are also the first two in the reissued patent. The latter, which in its specification and drawings is substantially the same with the original, adds seven additional claims, making nine in all. Of these, the bill alleges infringement as to the third, fourth, fifth, sixth and ninth.

The bill, after averring the issue of the original patent, and referring to the copy set out as an exhibit, contains the following averments :

“ That said letters patent, being afterwards found to be inoperative or invalid by reason of an insufficient or defective specification, which insufficiency or defect had arisen through inadvertence, accident, or mistake, and without any fraudulent or deceptive intention on the part of your orator, were afterwards surrendered and duly canceled by the Com-

Opinion of the court.

missioner of Patents ; that thereupon, and upon due application therefor, reissued letters patent of the United States, No. 10,264, were issued to your orator, dated the 26th day of December, 1882, granting to him, his heirs, or assigns, for the term of seventeen years from the said 10th day of March, 1874, the full and exclusive right of making, using, and vending to others to be used, the said invention, as by reference to said reissued letters patents here in court to be produced, and a copy of the specification and drawings of which is hereto attached, will more fully appear ; that said reissued letters patent were applied for in good faith and not for any fraudulent or improper purpose.; that, as your orator verily believes, no other person, firm, or corporation, not acting under his authority, ever began the manufacture, sale, or use of transom-lifters containing or embodying said inventions or improvements until long after your orator had consulted counsel and taken steps toward applying for said reissue, and until long after your orator had applied for and obtained a reissue of his previous patent on transom-lifters, having broader claims than any now contained in said reissue, No. 10,264 ; that, in making said application for said last mentioned issue, your orator presented to the Patent Office a full, sworn statement of facts and circumstances connected with his applying for and obtaining said original patent, No. 148,538, and with his delay in applying for said reissue ; that at the first said reissue application was rejected, on the ground that such statement did not show or furnish any sufficient explanation or excuse for said delay, and that your orator had lost his rights to such a reissue by reason thereof, the examiner citing *Miller v. Brass Co.*, 104 U. S. 350 [13 Am. & Eng. 303,] and other cases ; that, on appeal, said decision or rejection was reversed by the examiners-in-chief constituting the Patent Office Board of Appeal ; that, in a long and full opinion, said examiners-in-chief expressly held that your orator had sufficiently and satisfactorily explained said delay, and was still entitled to

Opinion of the court.

such a reissue, and that a part of said opinion, referring to claims appearing in said reissue, and now in controversy, was as follows :

“ ‘All the above claims, moreover, have been rejected upon a supposed legal bar to enlargement of claim, found in certain recent decisions of the courts, mainly of the Supreme Court of the United States, on which the other decisions cited are based. * * * We find upon review that there was a grave defect in applicant’s patent and claims, whereby it was inoperative to protect the invention disclosed by him, to the full extent to which he was entitled. * * * We do not find any evidence of such laches or delay, after ascertaining the defects of his patent, as to debar or estop him from the benefits of the statute. We do not find in his renewed application any attempt to enlarge the scope of his invention beyond what was originally disclosed ; but, on the contrary, an attempt to secure protection for the invention contained in the patent.’ ”

For the purpose of deciding the question of law arising on the demurrer to the bill, it is not necessary to set out the several claims in the original and reissued patents, with a view to a comparison. It is sufficient to say, that it is not claimed that the defendant is guilty of an infringement of either of the claims in the original patent as repeated in the reissue ; and it is admitted that the claims in the reissued patent, infringement of which is averred, are expansions of the original claims, not covered by them, but alleged, nevertheless, to be embraced within the invention as described in the original patent. This is to say, that if, as a matter of fact, the patentee was the first and original inventor of the parts and combinations covered by these claims, the language of the specification to the original patent would sufficiently embrace them.

It follows from this, that if, at the date of the issue of the original patent, the patentee had been conscious of the nature and extent of his invention, an inspection of the patent,

Opinion of the court.

when issued, and an examination of its terms, made with that reasonable degree of care which is habitual to and expected of men, in the management of their own interests, in the ordinary affairs of life, would have immediately informed him that the patent had failed fully to cover the area of his invention. And this must be deemed to be notice to him of the fact, for the law imputes knowledge when opportunity and interest, combined with reasonable care, would necessarily impart it.

Not to improve such opportunity, under the stimulus of self-interest, with reasonable diligence, constitutes laches which in equity disables the party who seeks to revive a right which he has allowed to lie unclaimed, from enforcing it, to the detriment of those who have, in consequence, been led to act as though it were abandoned.

This general doctrine of equity was applied with great distinctness to the correction of alleged mistakes in patents, by reissues, in the case of *Miller v. Brass Co.*, 104 U. S. 350 [13 Am. & Eng. 303.] It was there declared, that where the mistake suggested was merely that the claim was not as broad as it might have been, it was apparent upon the first inspection of the patent, and, if any correction was desired, it should have been applied for immediately; that the granting of a reissue for such a purpose, after an unreasonable delay, is clearly an abuse of the power to grant reissues, and may justly be declared illegal and void; that, in reference to reissues made for the purpose of enlarging the scope of the patent, the rule of laches should be strictly applied, and no one should be relieved who has slept upon his rights, and has thus led the public to rely on the implied disclaimer involved in the terms of the original patent; and that when this is a matter apparent on the face of the instrument, upon a mere comparison of the original patent with the reissue, it is competent for the courts to decide whether the delay was unreasonable and whether the reissue was, therefore, contrary to law, and void.

Opinion of the court.

This doctrine has been reiterated in many cases since, and at the present term has been reconsidered and emphatically repeated as the settled law, in the case of *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322,] where it is said, by Mr. Justice Bradley delivering the opinion of the court: "We repeat, then, if a patentee has not claimed as much as he is entitled to claim, he is bound to discover the defect in a reasonable time, or he loses all right to a reissue; and if the Commissioner of Patents, after the lapse of such reasonable time, undertakes to grant a reissue for the purpose of correcting the supposed mistake, he exceeds his power and acts under a mistaken view of the law; and the court, seeing this, has a right and it is its duty to declare the reissue *pro tanto* void, in any suit founded upon it." It was also there said that, while no invariable rule can be laid down as to what is reasonable time within which the patentee should seek for the correction of a claim which he considers too narrow, a delay of two years, by analogy to the law of public use before an application for a patent, should be construed equally favorable to the public, and that excuse for any longer delay than that should be made manifest by the special circumstances of the case.

In the present case the delay in applying for the reissue was more than five years. No special circumstances to account for or excuse the delay are set out in the bill. In lieu of such a statement, the complainant avers that he presented to the Patent Office a full, sworn statement of facts and circumstances connected with his applying for and obtaining his original patent, and with his delay in applying for the reissue, and that the examiners-in-chief decided that he had sufficiently and satisfactorily explained the delay, and was entitled to the reissue. But this does not satisfy the law. The question as to whether the delay had been reasonable or unreasonable is for the court to determine, upon the special circumstances brought to its attention; and it can-

Opinion of the court.

not substitute the decision of the Patent Office upon that question for its own. The very question is, whether the Patent Office has decided rightly ; and, as it is a question of power and jurisdiction, in which the delay shown is *prima facie* unlawful, it is incumbent on the party seeking to establish the jurisdiction of the Patent Office to grant the reissue, to show the facts on which it rests. In every case of a reissue, that office either expressly or implicitly decides the question of diligence on the part of the patentee ; and the grant of a reissue is a decision that the delay has not been unreasonable. That, therefore, is the very question for judicial review, in every suit to enforce a reissued patent in which the question is made ; and, as we have seen, the settled rule of decision is, that if it appears in cases where the claim is merely expanded, that the delay has been for two years or more, it is adjudged to invalidate the reissue, unless the delay is accounted for and excused by special circumstances, which show it to have been not unreasonable.

When, therefore, the injunction bill sets out or exhibits both the original and the reissued patent, and it appears from inspection that the sole object of the reissue was to enlarge and expand the claims of the original, and that a delay of two or more years has taken place in applying for the reissue, not explained by special circumstances showing it to be reasonable, the question of laches is a question of law arising on the face of the bill, which avails as a defence, upon a general demurrer for want of equity.

This rule of equity pleading applies in analogous cases ; as where, it otherwise appearing on the face of the bill that the claim is stale, or is barred by lapse of time, and it is sought to avoid the effect of such a bar on the ground that the fraud complained of was concealed and has been only recently discovered, it is necessary that “ the particular acts of fraud or concealment should have been set forth by distinct averments, as well as the time when discovered, so that the court may see whether, by the exercise of ordinary dili-

Notes and citations.

gence, the discovery might not have been before made." *Beaubien v. Beaubien*, 23 How. 190; *Stearns v. Page*, 7 How. 819; *Moore v. Greene*, 19 How. 69; *Marsh v. Whitmore*, 21 Wall. 178, 185; *Godden v. Kimmell*, 99 U. S. 201; *Badger v. Badger*, 2 Wall. 87; *Wood v. Carpenter*, 101 U. S. 135; *Lansdale v. Smith*, 106 U. S. 391.

The decree of the Circuit Court dismissing the bill for want of equity was correct and is affirmed.

115 U. S. 102.

Notes:

1. Delay in reissuing:

Battin v. Taggart, 17 How. 74 [6 Am. & Eng. 243.]

Kendall v. Winsor, 21 How. 322 [7 Am. & Eng. 1.]

Leggett v. Avery, 101 U. S. 256 [12 Am. & Eng. 369.]

Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303.]

James v. Campbell, 104 U. S. 356 [13 Am. & Eng. 341.]

Matthews v. Machine Co., 105 U. S. 54 [13 Am. & Eng. 501.]

Bantz v. Frantz, 105 U. S. 160 [13 Am. & Eng. 542.]

Johnson v. Railroad Co., 105 U. S. 539 [14 Am. & Eng. 19.]

Clements v. Odorless Co., 109 U. S. 641 [15 Am. & Eng. 44.]

Turner Mnfg. Co. v. Dover Stamping Co., 111 U. S. 319 [15 Am. & Eng. 238.]

Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322.]

Torrent & Arms Lumber Co. v. Rodgers, 112 U. S. 659 [15 Am. & Eng. 396.]

Brown v. Davis, 116 U. S. 237 [p. 212 *post.*]

Yale Lock Mnfg. Co. v. Sargent, 117 U. S. 536 [p. 275 *post.*]

White v. Dunbar, 119 U. S. 47 [p. 397 *post.*]

Newton v. Furst & Bradley Mnfg. Co., 119 U. S. 373 [p. 450 *post.*]

Ives v. Sargent, 119 U. S. 652 [p. 512 *post.*]

Hartshorn v. Saginaw Barrel Co., 119 U. S. 664 [p. 530 *post.*]

Parker & Whipple Mnfg. Co. v. Yale Clock Co., 123 U. S. 87.

Matthews v. Iron Clad Mnfg. Co., 124 U. S. 347.

Notes and citations.

Hoskin *v.* Fisher, 125 U. S. 217.

Cornell *v.* Weidner, 127 U. S. 261.

Flower *v.* City of Detroit, 127 U. S. 563.

Patent in suit:

No. 148,538. Wollensak, J. F. March 10, 1874. Reissue

No. 10,264. December 26, 1882. Transom-Lifter.

OTHER SUITS ON SAME PATENT:

Wollensak *v.* Reiher, 1884. 22 Fed. Rep. 651.

Cited:

IN SUPREME COURT IN:

Ives *v.* Sargent, 1887. 119 U. S. 652; Bk. 30 L. ed. 544.

Hoskin *v.* Fisher, 1888. 125 U. S. 217; Bk. 31 L. ed. 759.

IN CIRCUIT COURTS IN:

Gage *v.* Kellogg, May, 1885. 23 Fed. Rep. 891; 32 O. G. 381.

Arden *v.* Jewett, August, 1885. 32 O. G. 1240.

Hoe *v.* Kahler, October, 1885. 23 Blatch. 354; 25 Fed. Rep. 271;
34 O. G. 127.

Arnheim *v.* Finster, February, 1886. 26 Fed. Rep. 277; 34 O. G.
700.

Notes and citations.

Haines *v.* Peck, February, 1886. 26 Fed. Rep. 625; 35 O. G. 1227.

Boland *v.* Thompson, February, 1886. 23 Blatch. 442; 26 Fed. Rep. 633; 35 O. G. 1113.

Wollensak *v.* Reiher, July, 1886. 28 Fed. Rep. 424; 36 O. G. 1358.

West *v.* Rae, November, 1887. 33 Fed. Rep. 45.

Kittle *v.* Hall, January, 1887. 29 Fed. Rep. 508.

Wollensak *v.* Sargent, February, 1888. 33 Fed. Rep. 840.

Ligowski Clay-Pigeon Co. *v.* Amer. Clay-Bird Co., March, 1888. 34 Fed. Rep. 328.

Philadelphia Novelty Mnfg. Co. *v.* Rouse, July, 1889. 39 Fed. Rep. 273.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. pp. 182, 198, 442.

Walker on Pats., 2d ed., 1889. pp. 180, 389.

Oct., 1884.]

WOLLENSAK v. REIHER.

175

Syllabus.

JAMES EACHUS, APPELLANT, v. JOSHUA B. BROOMALL.*

115 U. S. 429-439. Oct. Term, 1885.

[Bk. 29, L. ed. 419 ; 33 O. G. 1265.]

Argued October 27, 1885. Decided November 16, 1885

Identity of invention. Admissible evidence of prior knowledge and use. Particular reissued patent.

1. A comparison of the original patents, for the purpose of determining the question as to the identity of inventions described in them, requires an interpretation of the original patent in the light of the state of the art at the date when the application for it was filed. (p. 184.)
2. Although the prior use or knowledge of the invention claimed in a reissued patent is not specifically set up in the answer as a defence, it is nevertheless admissible to consult the evidence on that point contained in the record, for the purpose of defining the limits of the grant in the original patent and the scope of the invention described in the specification. (p. 184.)
3. Where the original patent, No. 142,154, J. Eachus, August 26, 1873, Machine for cutting Paper-Boards, was for a particular organization of a machine for cutting paper-boards, whereby the various parts were combined and adjusted so as to fit it to accomplish the specific result of cutting heavy paper in large sheets, and in a wet condition, as received from a paper-making machine, and the reissue patent, No. 6,815, March 2, 1875, was for the process of sawing paper-boards in the wet state in which it was taken from the paper-making machine, *held*, that the reissued patent was not for the same invention as the original, and was therefore void even when restrained by construction to include only the process described when performed by means of the particular devices described, as it would still be broad enough to cover every arrangement, combination, and adjustment in which these devices may be found, and that is not the same invention which was described in the original patent. (p. 189.)

*See Explanation of Notes, page III.

Argument of counsel.

[Citations in the opinion of the court :]

- Vance v. Campbell, 1 Black, 427 [7 Am. & Eng. 117.] p. 184.
Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272.] pp. 184, 186.
Stimpson v. Woodman, 10 Wall. 117 [8 Am. & Eng. 221.] p. 186.
Tucker v. Spaulding, 13 Wall. 453 [8 Am. & Eng. 474.] p. 186.
Roberts v. Ryer, 91 U. S. 157 [10 Am. & Eng. 302.] p. 186.
Heald v. Rice, 104 U. S. 754 [13 Am. & Eng. 460.] p. 186.
Hall v. MacNeale, 107 U. S. 90 [14 Am. & Eng. 291.] p. 186.
Atlantic Works v. Brady, 107 U. S. 192 [14 Am. & Eng. 380.] p. 186.
Pennsylvania R. R. Co. v. Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148.] p. 186.
Powder Co. v. Powder Works, 98 U. S. 126 [12 Am. & Eng. 201.] p. 188.

Appeal from the Circuit Court of the United States for the Eastern District of Pennsylvania.

The history and facts of the case appear in the opinion of the court.

Messrs. Wayne MacVeagh, Joseph C. Farley, and George Tucker Bispham, for appellant :

If a process is properly patentable, there is no rule of law which prohibits its claim by reissue, where the original patent had mistakenly claimed a mechanism.

Powder Co. v. Powder Works, 98 U. S. 126 [12 Am. & Eng. 201 ;] James v. Campbell, 104 U. S. 356 [13 Am. & Eng. 341 ;] Heald v. Rice, 104 U. S. 737 [13 Am. & Eng. 460 ;] Wing v. Anthony, 106 U. S. 142 [14 Am. & Eng. 188 ;] Tilghman v. Proctor, 102 U. S. 707 [13 Am. & Eng. 29.]

An analysis of these decisions which, on a superficial examination, would seem to conflict with appellant's position, will show that they condemn the claiming of "processes" by reissue in only two classes of cases.

a. Where the process of the reissue is different from that of the original.

b. Where the word "process" in the reissue is only a cover for claiming a principle or abstract idea.

In the case at bar neither of these objections exists.

Mr. Charles H. Pennypacker, for appellee :

The original patent is for a "machine." The reissue is for a "process."

Opinion of the court.

See *Heald v. Rice*, 104 U. S. 753 [13 Am. & Eng. 460 ;] *Manufacturing Co. v. Corbin*, 103 U. S. 786 [13 Am. & Eng. 147 ;] *Moffitt v. Rogers*, 106 U. S. 423 [14 Am. & Eng. 244 ;] *Powder Co. v. Powder Works*, 98 U. S. 126 [12 Am. & Eng. 201 ;] *James v. Campbell*, 104 U. S. 356 [13 Am. & Eng. 341 ;] *Wing v. Anthony*, 106 U. S. 142 [14 Am. & Eng. 188.]

Mr. Justice MATTHEWS delivered the opinion of the court :

The bill in equity, which was dismissed on the merits by the decree appealed from, was filed by the appellant to restrain the alleged infringement of reissued letters patent, No. 6,315, dated March 2, 1875, based on the original patent, No. 142,154, dated August 26, 1873, issued to James Eachus, the complainant.

The specification forming part of the original patent, as set out in the record, is as follows :

“Be it known that I, James Eachus, of Coatesville, in the County of Chester, State of Pennsylvania, have invented a new and useful Machine for Cutting Paper Boards, of which the following is a specification :

“The nature of my invention consists in combining six adjustable circular saws upon two shafts, set at any angle to each other, and a two-way carriage supported by a frame, and provided with guides so as to work easily and carry the material to be cut. The object of the invention is to trim and cut heavy paper used in the manufacture of books and boxes.

“Figure 1 is a front view of my invention. Fig. 2, a side elevation, and Fig. 3 a ground plan.

“In Fig. 3, E is the frame, which should be strongly constructed, and in the form of an L. B B and T T are guides on frame E. A is a two-way carriage, constructed in such a manner as to play freely upon guides B B and T T. D and F are saw-shafts mounted upon adjustable bearings bolted to frame E. C C C and S S S are circular saws, secured upon shafts D and F by adjustable collars.

J. EACHUS.

Process of Cutting Wet Paper.

No. 6,315.

Reissued March 2, 1875.

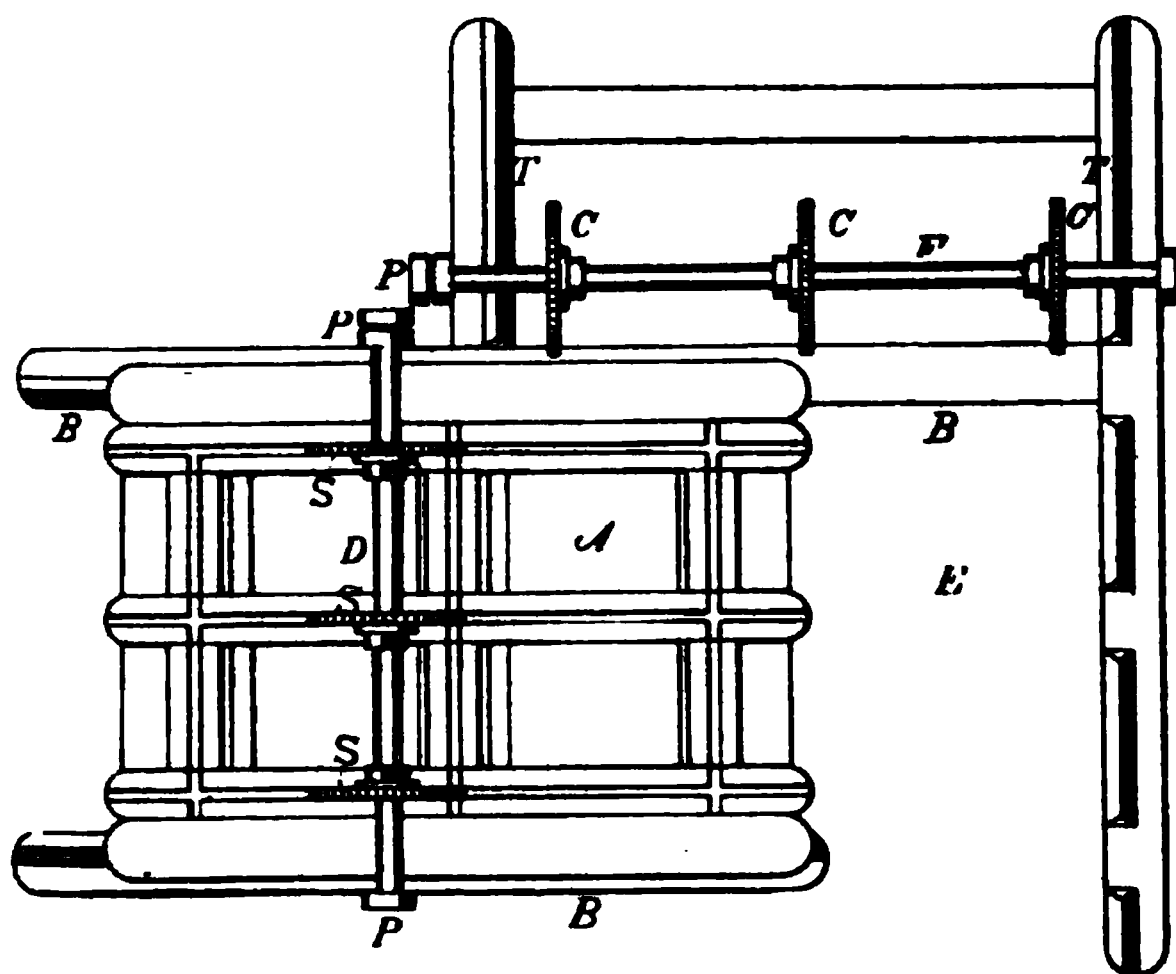


Fig. 1.

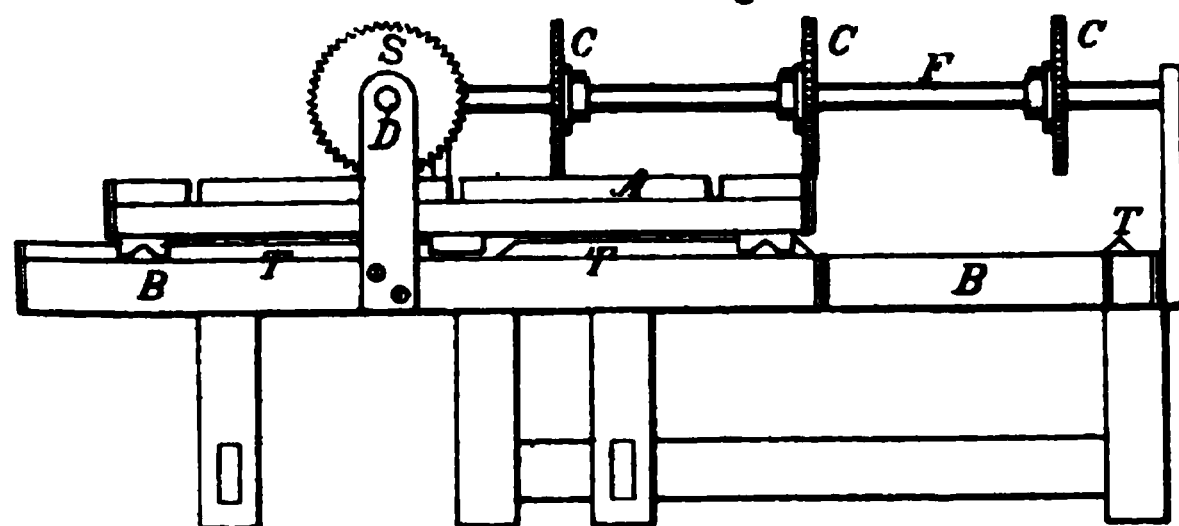


Fig. 2

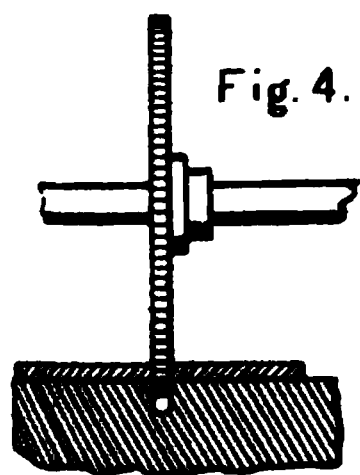
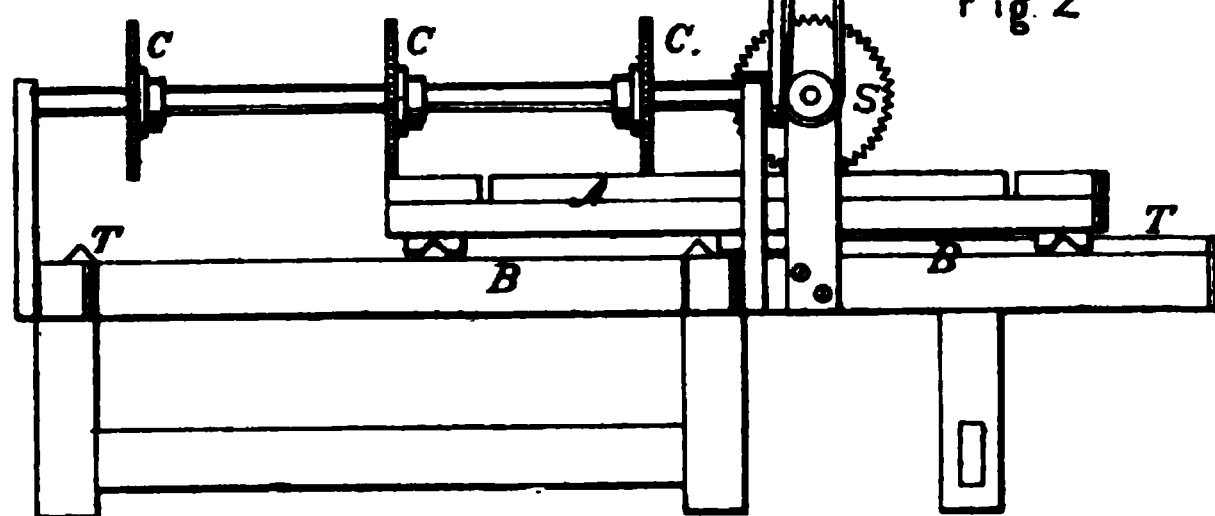


Fig. 4.



WITNESSES

George B. Upham.
E. H. Bates

BY

James Eachus
Chapman & Fournier & Co.

INVENTOR

ATTORNEYS

Opinion of the court.

“For the purpose of operating my machine, shafts D and F are provided with pulleys P P. Rotation is communicated by belts H H, Fig. 2, from a shaft G, on which are pulleys P' P'.

“Upon carriage A, Fig. 3, is placed the wet paper to be cut. The pile is composed of a number of large sheets, as they are taken from the paper-machine. The carriage is then drawn upon the guides B B, saws S S S cutting through the paper; thence at right angles to the first direction upon guides T T, saws C C C cutting through the pile in the new direction, the result of the operation being to trim the edges and cut each sheet in four.

“The saws can be adjusted upon shafts D and F, so as to trim and cut the sheets to any desired size.

“I make no claim to the arrangement of circular saws and carriages working upon guides for the purpose of cutting logs, blocks of wood, wood of any kind, or any other material except paper; but

“I claim—

“The combination of shaft D, shaft F, saws S S S and C C C, carriage A, and frame E, for the purpose of cutting binders' and boxmakers' paper, substantially as shown and described.”

The drawings referred to are as follows:

The drawings accompanying the specification, which form part of the reissued patent, are the same as the original, except one described as Figure 4, which was added, but is unimportant. The specification of the reissued patent is as follows:

“Be it known that I, James Eachus, of Coatesville, in the County of Chester, and State of Pennsylvania, have invented a new and improved Process of Cutting Paper Boards, of which the following is a description, reference being had to the accompanying drawings, in which—

“Figure 1 is a front view of my machine for conducting my process. Fig. 2 is a side elevation of such machine.

Opinion of the court.

Fig. 3 is a top view, and Fig. 4 is a detail of a saw in the act of cutting.

“ Similar letters of reference indicate corresponding parts in the several figures.

“ The object of this invention is to trim and cut heavy paper used in the manufacture of boxes and books ; and it consists in subjecting the paper while in a wet state, as it is taken from the paper-making machine, to the action of circular cutters having serrated edges, whereby the sheets are cut evenly and economically, and the trimmings can be returned to the paper machine without regrinding or other treatment.

“ In the annexed drawings I have represented one practical form of a machine for conducting my process ; but I desire to be understood as not confining myself to the precise construction of such machine, nor to the number of serrated cutters shown.

“ In Fig. 3, E designates the frame, which should be strongly constructed. B B and T T are guides on frame E. A is a two-way carriage, which is constructed in such manner as to play freely on the guides B B and T T. D and F are saw-shafts, which are mounted upon adjustable bearings bolted to frame E. C C and S S S are circular saws or cutters, having serrated edges, adapted for the purpose intended, which saws are secured upon shafts D and F by adjustable collars.

“ For the purpose of operating this machine, shafts D and F are provided with pulleys P P. Motion is communicated by belts H H, Fig. 2, from a shaft G, on which are pulleys P' P'.

“ The paper to be cut is put upon the carriage A. The pile is composed of a number of large sheets as they are taken from the paper-making machine in a very wet condition. The carriage is then drawn upon the guides B B, saws S S S cutting through the paper thence at right angles to the first direction upon guides T T, saws C C C cutting through the

Opinion of the court.

pile in the new direction, the result of the operation being to trim the edges of the sheets and cut each sheet into four parts.

“The saws can be adjusted on shafts D and F, so as to trim and cut the sheets any desired size.

“It will be seen from the above description that I take sheets of paper, while they are in a wet condition, directly from the paper-making machine, and pass the saws over them, thereby trimming their edges, and leaving them of an equal thickness throughout, and dividing them into smaller sheets. This process of sawing cannot be performed successfully and without tearing the surface of the sheets unless the sheets are wet, and in the condition in which they leave the paper-making machine.

“I make no claim to the arrangement of circular saws and carriages for the purpose of sawing logs or any kind of wood ; nor do I broadly claim the machine herein described for sawing wood.

“I am aware that paper board has heretofore been sawed when in a dry state, and I therefore lay no claim to such invention, which leaves the edges of the paper thus sawed in a jagged condition, the action of the saw-teeth tending to separate the fibers of the paper board in the line of the kerf ; whereas, when the paper board is sawed in a wet state, directly after leaving the paper-machine, the edges are left smooth, the saw causing an interlocking of the fibers in its pass through the paper, and the trimmings of the paper being in a condition to be returned to the vat without re-grinding, which would not be the case with trimmings of paper board sawed in a dry state.

“What I claim as new, and desire to secure by letters patent, is,

“The process of sawing paper board as herein described, consisting in sawing the paper board while it is in the wet state in which it is taken from the paper-making machine, substantially as described, and for the purpose set forth.”

Opinion of the court.

The only defences set up in the answer are a denial of the validity of the reissued patent and a denial of the alleged infringement.

(a) A comparison of the two patents, for the purpose of determining the question raised as to the identity of the inventions described in them, requires an interpretation of the original patent in the light of the state of the art at the date when the application for it was filed. And we have the material for ascertaining its meaning, in that view, by means of the evidence on that point contained in the record, which, although objected to on the ground that no prior use or knowledge of the invention claimed had been specifically set up in the answer as a defence, was nevertheless admissible for the purpose of defining the limits of the grant in the original patent and the scope of the invention described in its specification. *Vance v. Campbell*, 1 Black, 427 [7 Am. & Eng. 117;] *Brown v. Piper*, 91 U. S. 37 [10 Am. & Eng. 272.]

From that evidence, it appears that, at the time of the alleged invention of the appellant, and for many years prior thereto, paper boards for bookbinding or for making boxes were cut, trimmed, or separated, while in a wet or moist state, as the paper in sheets came from the mill, by means of a hand-saw, sometimes with teeth, and sometimes ground with a curved line to a sharp edge. This was the mode or process in universal use. Heavy paper coming from the machine in a dry condition was cut, for similar purposes, in one direction by means of rolling shears; that is, revolving circular discs, operated on a shaft, their edges ground to an angle of about sixty degrees, the same as a pair of scissors; and in the other direction by straight shears, acting like ordinary scissors.

It is manifest, from this state of the art, that it was not open to the appellant, at the time he applied for his patent,
115 U. S. 433-435.

(a) 115 U. S. inserts "He stated the facts in the language above reported, and continued:" and begins opinion here.

Opinion of the court.

to claim as his invention the discovery that heavy paper intended for the use of bookbinders and boxmakers, could best be cut into proper shapes and sizes, while in wet sheets, as they came from the machine; nor that the cutting could best be performed by cutters with serrated edges; for this was matter of general knowledge and common practice.

Accordingly, in the specification to his original patent, he declared the nature of his invention to consist "in combining six adjustable circular saws upon two shafts, set at any angle to each other, and a two-way carriage supported by a frame, and provided with guides so as to work easily and carry the material to be cut." Then follows a description of the machine which contains this combination, and of the mode of operating it, so as to effect the result of cutting the large wet sheets of heavy paper, placed on the frames for that purpose, in both directions, into smaller sheets of any desired sizes. This description refers to the drawings, which show the machine with all its parts, and their relations to each other, in their combination.

But none of these parts, either in their construction or mode of operation, or general function, are novel; for saws and shafts, and frames for carrying material to be cut, had been in common use for cutting other material, and were well known. Accordingly, the appellant, in his specification, enters an express disclaimer as to all such uses, and the combinations and arrangements of well-known machinery by which they had been effected. He says: "I make no claim to the arrangement of circular saws and carriages, working upon guides for the purpose of cutting logs, blocks of wood, wood of any kind, or any other material except paper." And thereupon states his claim, precisely, as follows: "The combination of shaft D, shaft F, saws S S S and C C C, carriage A, and frame E, for the purpose of cutting binders' and boxmakers' paper, substantially as shown and described."

It is plain, then, that the only invention exhibited in the

Opinion of the court.

drawings, or described in the specifications of the original patent, consists in the particular organization of the machine described, whereby the various parts are combined and adjusted, so as to fit it to accomplish the specific result of cutting heavy paper when in large sheets and in a wet condition, as received from the paper-making machine, into smaller sizes and other shapes, for use as boards in book binding and boxmaking.

Whether the particular construction and arrangement of the parts forming the combination and adjustment described was, of itself, something novel, requiring invention, or whether the adaptation and application of such a combination to the particular use declared was an invention by reason of the novelty of the use and the new result obtained, within the principle of the cases of *Stimpson v. Woodman*, 10 Wall. 117 [8 Am. & Eng. 221 ;] *Tucker v. Spaulding*, 13 Wall. 453 [8 Am. & Eng. 474 ;] *Brown v. Piper*, 91 U. S. 37 [10 Am. & Eng. 272 ;] *Roberts v. Ryer*, 91 U. S. 157 [10 Am. & Eng. 302 ;] *Heald v. Rice*, 104 U. S. 754 [13 Am. & Eng. 460 ;] *Hall v. MacNeale*, 107 U. S. 90 [14 Am. & Eng. 291 ;] *Atlantic Works v. Brady*, 107 U. S. 192 [14 Am. & Eng. 380 ;] and *Pennsylvania Railroad v. Locomotive Truck Co.*, 110 U. S. 490 [15 Am. & Eng. 148,] are questions not before us. It is sufficient to say that, whether for such an alleged invention the original patent could or could not be upheld, it cannot be construed as good for anything more or other than that.

We turn now, for the purpose of comparison, to the reissued patent. In the specification thereto the patentee declares that he has invented, not a machine, but “a new and improved process of cutting paper boards,” of which a description follows ; that the drawings referred to are views of “my machine for conducting my process ;” that the invention consists “in subjecting paper, while in a wet state, as it is taken from the paper-making machine, to the action of circular cutters having serrated edges, whereby the

Opinion of the court.

sheets are cut evenly and economically, and the trimmings can be returned to the paper machine without regrinding or other treatment ;” that, in the annexed drawings “I have represented one practical form of a machine for conducting my process, but I desire to be understood as not confining myself to the precise construction of such machine, nor to the number of serrated cutters shown.” After describing the construction and operation of the machine, by reference to the drawings, the specification proceeds: “It will be seen from the above description that I take sheets of paper, while they are in a wet condition, directly from the paper-making machine and pass the saws over them, thereby trimming their edges and leaving them of an equal thickness throughout and dividing them into smaller sheets. This process of sawing cannot be performed successfully and without tearing the surface of the sheets, unless the sheets are wet and in the condition in which they leave the paper-making machine.”

Then follow these disclaimers :

“I make no claim to the arrangement of circular saws and carriages for the purpose of sawing logs or any kind of wood ; nor do I broadly claim the machine herein described for sawing wood. I am aware that paper board has heretofore been sawed when in a dry state, and I therefore lay no claim to such invention, which leaves the edges of the paper thus sawed in a jagged condition, the action of the saw-teeth tending to separate the fibers of the paper board in the line of kerf ; whereas, when the paper board is sawed in a wet state, directly after leaving the paper machine, the edges are left smooth, the saws causing an interlocking of the fibers in its path through the paper, and the trimmings of the paper being in a condition to be returned to the vat without regrinding, which would not be the case with trimmings of paper board sawed in a dry state.”

The specification then concludes with the claim, as follows :

Opinion of the court.

“What I claim as new, and desire to secure by letters patent, is—

“The process of sawing paper board as herein described, consisting in sawing the paper board while it is in the wet state in which it is taken from the paper-making machine, substantially as described, and for the purposes set forth.”

A comparison of the two patents makes it very clear that if the patentee had in fact conceived the idea of enlarging the scope of his invention by development from a machine into a process, he has taken no pains to conceal or disguise his purpose; for he entitled his original patent as for a new and useful machine for cutting paper boards, while with equal explicitness, in his reissue, he declared that he had invented a new and improved process of cutting paper boards. This is at least a *prima facie* departure from the original grant, which would seem to be serious, if not fatal, under a law that limits the power of the Commissioner of Patents so as to issue a new patent only for the same invention, when the original has been surrendered, as inoperative or invalid, by reason of a defective or insufficient specification, or by reason of the patentee claiming as his own invention or discovery more than he had a right to claim as new, if the error has arisen by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention. If there had been any doubt as to how the matter was understood by the patentee himself, it has been removed by his testimony in the case, in which, in answer to the question, “For what purpose did you ask a reissue of your patent?” he said: “I was told that a process would cover more than a mere machine, and so I applied for a process.”

Taken in this obvious sense, the reissued patent falls directly under the condemnation of the law as declared in *Powder Co. v. Powder Works*, 98 U. S. 126 [12 Am. & Eng. 201,] and other similar cases not necessary to be cited.

The attempt is made, in argument on behalf of the appellant, by construction to convert the original patent into a

Notes and citations.

patent for a process, in which the real invention described “consisted in operating upon a peculiar kind of material with a peculiar kind of cutter,” and in which the claim was inadvertently framed so as to cover merely the machine itself and not the process in which it was one only of the factors. But we have already shown, by reference to the state of the art, according to which heavy paper in a wet condition was cut by means of a saw, that the original patent could not be construed as including such a process without invalidating it; and, from the terms of the specification itself, that no such process is described as the invention intended to be claimed. The patent is plainly limited by its language to the combination, arrangement, and adjustment of the particular parts of the very machine described, for the uses to which it is declared to be applicable. On the other hand, the claim of the reissued patent is broad enough to cover the process of sawing paper boards in a wet state by means of a hand-saw; and if, for the purpose of saving it from the necessary consequences of such a claim, it is restrained by construction so as to include only the process described when performed by means of circular cutters having serrated edges—terms of limitation to be found in the specification—it is still broad enough to cover every arrangement, combination, and adjustment in which these elements may be found; and this surely is not the same invention as that described in the original patent.

The decree of the Circuit Court dismissing the bill is affirmed.

115 U. S. 438-439.

Notes:

2. Evidence of the state of the art admissible without notice:

- Vance v. Campbell, 1 Black, 427 [7 Am. & Eng. 117.]
- Railroad Co. v. DuBois, 10 Wall. 47 [8 Am. & Eng. 433.]
- Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272.]
- Dunbar v. Meyers, 94 U. S. 187 [11 Am. & Eng. 59.]
- Bridge Co. v. Iron Co., 95 U. S. 274 [11 Am. & Eng. 364.]
- Grier v. Wilt, 120 U. S. 412. [p. 588 *post.*]

Notes and citations.

3. Mechanical combination claims cannot be construed to be for a process :

Le Roy *v.* Tatham, 14 How. 156 [5 Am. & Eng. 313.]

Corning *v.* Burden, 15 How. 252 [6 Am. & Eng. 69.]

Railroad Co. *v.* DuBois, 12 Wall. 47 [8 Am. & Eng. 433.]

Grier *v.* Wilt, 120 U. S. 412 [p. 588 *post.*]

Dryfoos *v.* Wiese, 124 U. S. 32.

Crescent Brewing Co. *v.* Gottfried, 128 U. S. 158.

Reissue of a machine patent to cover process :

James *v.* Campbell, 104 U. S. 356 [13 Am. & Eng. 341.]

Heald *v.* Rice, 104 U. S. 737 [13 Am. & Eng. 460.]

Wing *v.* Anthony, 106 U. S. 142 [14 Am. & Eng. 188.]

Patent in suit :

No. 142,154. Eachus, J. August 26, 1873. Reissue No. 6,315. March 2, 1875. Machine for Cutting Paper Boards.

Cited :**IN SUPREME COURT IN :**

Grier *v.* Wilt, 1887. 120 U. S. 412 ; Bk. 30 L. ed. 712.

Notes and citations.

IN CIRCUIT COURTS IN:

Arnheim v. Finster, February 1886. 26 Fed. Rep. 277; 34 O. G. 700.

Eastern Paper Bag Co. v. Standard Paper Bag Co., February, 1887. 30 Fed. Rep. 63; 41 O. G. 231.

IN DECISIONS OF COMMISSIONER OF PATENTS IN :

Ex parte Herr, October, 1887. 41 O. G. 463.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. p. 190.

Walker on Pats., 2d ed., 1889. pp. 186, 356.

Syllabus.

ANTON MILLER AND CHRISTIAN WORLEY, JOHN FINZER ET AL., Partners, as JOHN FINZER & BROTHERS, APPELLANTS, v. SAMUEL J. FOREE AND EDWARD J. FOREE.*

116 U. S. 22-28. Oct. Term, 1885.

[Bk. 29, L. ed. 552; 33 O. G. 1497.]

Argued November 2, 1885. Decided December 14, 1885.

Particular reissued patent. Process. What is not an abandoned experiment. Prior invention.

1. Claim 1 of reissued letters patent, No. 8,060, Miller & Worley, January 29, 1878, Finishing Plug Tobacco, *held*, broader than the claim in the original, No. 185,119, December 5, 1876; if limited in conformity with the original to the described process of impressing letters or marks directly into the side of the plug during the finishing process, *held*, in view of the state of the art to be for applying a process of stamping tobacco, which was already well known, to the same tobacco at a later stage in the process of manufacture, and is void for analogous use not involving invention, *held*, further anticipated by the Smith process. (p. 197.)
2. Where an alleged prior process continued to be used for many years, though somewhat imperfectly applied, *held*, that it could not be regarded as an abandoned experiment. (p. 199.)
3. Prior invention made out where a sample of the prior device is produced and identified by several witnesses whose characters for truth and veracity complainants have failed to substantially affect. (p. 199.)

[Citations in the opinion of the court :]

Penna. R. R. Co. v. Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148.] p. 201.

Appeal from the Circuit Court of the United States for the District of Kentucky.

The facts and case are stated by the court.

* See Explanation of Notes, page III.

Argument of counsel.

Messrs. Arthur Stem, George Harding, James A. Beattie, and Francis T. Chambers, for appellants :

While the language of the claim of the reissue differs somewhat from that of the claim of the original, these claims, viewed in the light of the specification, are for identically the same thing, and considered with reference to the authorities are to be so construed. The language of the claim is to be limited by the specification, according to the description of the invention therein given by the patentee. The Corn-Planter Patent, 23 Wall. 181 [10 Am. & Eng. 1 ;] Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290 ;] Hailes v. Van Wormer, 20 Wall. 553 [9 Am. & Eng. 340 ;] Sugar Refinery Co. v. Matthiessen, 2 Fish. 600.

Admitting that the added claim in the reissue was invalid, the first claim being substantially the same as the original patent is, according to the later decisions of this court, good and valid.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454 ;] Mahn v. Harwood, 30 O. G. 657 [15 Am. & Eng. 322.]

Not one of the alleged anticipations before the court below, except Seidler has ever gone into any use. Not one of them could be used.

The Seidler patent simply shows a tin tag underneath the wrapper. The mark is an extraneous substance pressed into the tobacco. It is not a marking of the tobacco plug itself. There is no mark impressed into the surface of the plug during the process of manufacture, and especially none during the process of finishing. Indeed the plug never goes to the finisher. Therefore, although there is an identifying, ineffaceable mark affixed to the plug, there is no use of the Miller & Worley process.

We submit that the St. Louis plug does not anticipate the Miller & Worley invention because the process is not the same ; because the St. Louis plug was never a finished plug at all ; because the Fisher process, if anything, is nothing more than an abandoned experiment, from which the world derived no advantage whatever while the patented process

Opinion of the court.

has gone into extensive use ; because there was never any public use of the experimental process of Fisher.

We say in conclusion that Miller and Worley have made a valuable invention as disclosed by both original and reissued patents.

Mr. Benj. F. Thurston, for appellee :

It is apparent that the reissued patent has been very much enlarged. The effect of this broadened reissue is not only to destroy its validity on well-settled principles of law, which were uniformly recognized by this court prior to the decision of *Miller v. Bridgeport Brass Co.*, 104 U. S. 350 [13 Am. & Eng. 303,] but, in addition, the different process which the reissued patent now states renders applicable for its destruction various acts done by others prior to the supposed invention of the patentees as full and complete anticipations of the claim of invention.

The record discloses that the process of the reissued patent was, before the supposed invention of the patentees, known to and practiced by various individuals.

The prior knowledge of the supposed invention thus proved, brings the law of the case clearly within *Coffin v. Ogden*, 18 Wall. 124 [9 Am. & Eng. 125 ;] *Kelleher v. Darling*, 4 Cliff. 424 ; *McNish v. Everson*, 2 Fed. Rep. 900 ; *Gayler v. Wilder*, 10 How. 477 [5 Am. & Eng. 188.]

Mr. Justice BRADLEY delivered the opinion of the court :

This is a suit brought by the appellants against the appellees, complaining of the infringement of a certain patent granted to Anton Miller and Christian Worley, two of the complainants, for an alleged improvement in finishing tobacco plugs and in marking the same. A patent was applied for September 23d, 1876, and was granted on the 5th day of December, 1876. It was subsequently surrendered and reissued on the 29th of January, 1878. The improvement, as declared in the specification, consists in pressing

Opinion of the court.

in the side of the plug, during the process of manufacture, letters or marks, so as to be ineffaceable. The description contained in the reissued patent, which does not differ materially from that contained in the original, after referring to the illustrative drawings, which are not necessary to the understanding of the invention, proceeds as follows:

“In carrying out our process, the plugs are packed with alternating plates in the finisher, so that they take their permanent set with the impression in them, whereby said impression is preserved ineffaceable.

“We have used the process of finishing tobacco as described in patent No. 181,512, issued to Worley and McCabe, on the application of Christian Worley, and dated August 22, 1876; but this system of marking may be used in conjunction with the ordinary finishing process by having the devices in relief on pressure plates used in the last pressing.

“Our preferred manner of forming the letters on the plates A' is by stamping them therein, and then making the letters solid by filling in the concave side of the letters with melted metal, such as solder, so that said letters will withstand the extreme pressure to which they are subjected in the finishing-box.

“In constructing said compress plate, however, any projecting surfaces in relief, either formed upon the plate or loose from the same, would secure the same result and may be employed.”

From this description it appears that the process consists simply in attaching or placing raised characters on the metallic plates which are interlaid between the layers of tobacco to give it a smooth surface in its final compression, which characters leave their imprint in the side of the plugs.

The claim of the original patent was for—

“The mode of simultaneously stamping and finishing tobacco, consisting of tightly compressing the plugs between plates having in relief letters in alternating series, substantially in the manner described.”

Opinion of the court.

The claim of the reissued patent is for—

“1. The described process of marking plug tobacco, which consists in impressing letters or other marks directly into the side of the plug during the process of manufacture, and by the pressure employed in making the plug, substantially as described.

“2. A tobacco plug marked with an impression, substantially as described.”

The second claim of the reissue was afterwards abandoned and formally disclaimed in the Patent Office. The first claim is, in its terms, broader than the claim of the original patent. It is a general claim for the described process of impressing letters or marks directly into the side of the plug during the process of manufacture. This embraces the application of the process at any stage of the manufacture, either in the molding process or the finishing process. But if it should be confined by construction to the latter, as in the claim of the original patent, it would still apply to every kind of finishing process, whether separate from the molding process or not.

The question then, will be, whether this claimed invention was anticipated by prior invention or use in the art.

Impressions of letters, figures, and other marks have for a long period been made by compression upon plastic substances, such as cakes of soap and chocolate, bars of lead, balls of butter, sealing wax, the leather covers of books, etc. It was not strange, therefore, that the same process for producing a like result should have been applied to tobacco when molded and compressed into solid plugs of definite form. An English patent was granted to Thomas and George Cope in April (specification filed October,) 1868, for improvements in machinery for molding, pressing, and stamping Cavendish and other tobacco into any desired form by suitable dies. These dies have any desired form and design; and, when filled with tobacco a powerful pressure is applied by means of a metallic die-piece, which gives to

Opinion of the court.

the tobacco a durable form and solidity, with the impression of the shape and design of the dies. In describing the machine and its operation, the patentees say: "This machine is useful for various purposes in manufacturing tobacco; it can be advantageously employed in stamping or forming devices of various kinds on tobacco."

Another patent was granted to Gibson and others in April (specification filed October,) 1874, for a mode of heating, pressing, and curing roll and coil tobacco, in the course of which the tobacco (in the case of coil) is alternated with metallic plates, between which and the coils are placed thin wooden discs of a size to match the plates, and between these and the coils of tobacco a thin metal plate, bearing the manufacturer's name, abode, trade mark, etc. It is then heated and afterwards submitted to great pressure. And the inventors add: "When the tobacco has cooled down sufficiently it is removed, and the sheath-pipe being withdrawn by gentle pressure, the metallic discs, scale-board discs, and name-tablets are separated from the tobacco, and the tobacco is found to be impressed with the name or marks from the tablets, the rest of its surface having the impression of the wooden disc, smooth, or showing the grain of the timber. The tobacco, then, thoroughly cured and pressed, is fit for sale."

Charles Siedler obtained a patent of the United States, dated January 12th, 1875, reissued October 24, 1876, on application filed April 26, 1875, for impressing into the body of the plugs of tobacco metallic labels with raised letters, etc., either covered or not covered by the outside wrapper, whereby he obtained distinct and durable impressions. He says: "Before giving the plug of tobacco its final pressure the metal B b [the label] is placed in proper position upon it by an attendant, and by subsequent powerful pressure the label is sunk into the body of the tobacco so, that its face is about flush with the outer surface thereof, and its points sink quite deeply into the most dense mass. It adheres

Opinion of the court.

firmly. * * * The plugs thus impressed with the hard labels, presenting the letters in relief, are then wrapped in a large leaf of properly dampened tobacco, and again powerfully compressed. The label appears beneath the wrapper of the finished plug, and is not liable to be removed by any ordinary or extraordinary cause."

In 1867 or 1868 Fisher and Harris of St. Louis fitted into a mold for plug tobacco a metallic plate, having on its face the word "Blackberry" in raised letters, in the form of types, which produced on the surface of the plug, as it was pressed in the mold, the word "Blackberry." Many plugs were made in this mold and received the said impression, from the time of its construction until 1876, and were sold in the market. Boyce and Brothers bought out Fisher and Harris in 1869, and continued to use the same mold. It is true that this mold was only one in a block or frame of fifteen molds; and eleven other frames were used in connection with this frame, without any such types in them, in making up boxes of tobacco. But in view of the fact that the mold having the types continued to be used for many years, and that the word "Blackberry" was invariably printed on the tobacco, the process, though somewhat imperfectly applied, cannot be regarded as an abandoned experiment. The impression, being made in the mold whilst the tobacco was moist, might not remain as clearly defined as if it were made in the finishing process (when a further finishing process was used,) but it continued to appear quite distinctly and remained as a permanent mark on the tobacco, as is seen in the specimen which has been preserved and made an exhibit in the cause.

There is also evidence in the case of a zinc plate with raised characters, forming the name of the maker, one "E. F. Smith," being used by him in the summer of 1875, both in the molding and in the finishing process, for the purpose of imprinting the name upon plug tobacco which he was then manufacturing in a small way in Evening Shade, a vil-

Opinion of the court.

lage in Arkansas. The plate was used in substantially the same way as that described in the patent of the complainants ; and if the evidence is to be believed, the fact of prior anticipation is clearly established. The circuit judge who decided this case in the court below, after a careful examination of the testimony on the subject, came to the conclusion that it was to be believed, and based his decision principally upon it. We have come to the same conclusion. It is true that a vigorous effort was made to break down the testimony of the principal witnesses, Smith and his foreman Lee ; and it was pretty clearly shown that much could be affirmed derogatory to their general characters. But the complainants failed to show anything substantially affecting their characters for truth and veracity, or that they were not to be believed under oath. Besides, the manner in which their testimony was given and in which they bore the test of a somewhat rigorous cross-examination, tends to give confidence in the truth of their statements. And they are not without a good deal of corroboration. One of the alleged identical plates was produced ; and the jeweler who made it, being called as a witness, recognized it and said that he thought he made two of them ; and he corroborated the date, and testified that Smith showed him some tobacco which he said had been marked with the plate, and which appeared to have been so marked. Metcalf, one of the complainants' witnesses, also states on cross-examination that he had seen one or two plugs with Smith's name impressed on it, which he (Smith) represented to be his work, and that this was in 1875 or 1876. Huddleston, the sheriff of the county, testified that he had purchased plug tobacco from Smith, about that time, with Smith's name impressed upon it. The fact that the process was not used to a great extent, and not brought into more public notice, is explained by the further facts that Smith's manufacture was not of large extent, and that his establishment was closed by the internal revenue officers in the spring of 1876,

Notes and citations.

in consequence of sales charged to have been made by him without the proper stamp.

We think that the alleged process of Smith is substantiated by the evidence, and that the decision of the case might be rested on his anticipation of the complainants' invention.

But it is not necessary to rely on this branch of the case alone. Leaving the evidence in relation to Smith's process out of the case, the state of the art at the time of Miller and Worley's application for a patent, as already pointed out, was such as to leave no ground for its issue. What more did they do, at most, than to apply a process of stamping tobacco, which was already well known, to the same tobacco at a later stage in the process of manufacture? Did this entitle them to a patent? According to the ruling of this court in *Pennsylvania R. R. Co. v. Locomotive, etc., Truck Co.*, 110 U. S. 490 [15 Am. & Eng. 148,] this question must be answered in the negative. That case is precisely in point. The contrivance for allowing the cars, in rounding a curve, to have a lateral motion so as to counteract the tendency to depart from the track, had been applied to passenger cars but not to locomotives. Smith, the patentee in that case, obtained a patent for applying that same device to locomotives. We decided the patent to be void, and held, in general terms, that "The application of an old process or machine to a similar or analogous subject, with no change in the manner of applying it, and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not before been contemplated." We adhere to that ruling; and the principle involved in it is fatal to the patent now under consideration.

The decree of the Circuit Court is affirmed.

116 U. S. 27-28.

Notes :

1. Process void for analogous use :

Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272.]

Notes and citations.

Western Electric Mnfg. Co. *v.* Ansonia Brass Co., 114 U.
S. 447 [p. 94 *ante.*]
Dreyfus *v.* Searle, 124 U. S. 60.

Patent in suit:

No. 185,119. Miller & Worley. December 5, 1876. Re-
issue No. 8,060. January 29, 1878. Finishing Plug
Tobacco.

OTHER SUITS ON SAME PATENT :

Liggett & Myers Tobacco Co. *v.* Miller, 1880. 1 McCrary, 31 ; 1
Fed. Rep. 203 ; 5 Ban. & Ard. 237 ; 17 O. G. 798.
Miller *v.* Liggett & Myers Tobacco Co., 1881. 2 McCrary, 375 ; 7
Fed. Rep. 91 ; 19 O. G. 1138.
Miller *v.* Foree, 1881. 9 Fed. Rep. 603 ; 21 O. G. 947.

Cited:

IN CIRCUIT COURTS IN :

Holmes Electric Protective Co. *v.* Metropolitan Burglar Alarm
Co., December, 1887. 33 Fed. Rep. 254.
Babcock & Wilcox Co. *v.* Pioneer Iron Works, March, 1888. 43
O. G. 756 ; 34 Fed. Rep. 338.
Grant *v.* Walter, May, 1889. 38 Fed. Rep. 594 ; 47 O. G. 1220.

IN TEXT BOOKS :

Walker on Pats., 2d ed., 1889. p. 37.

[illegible]

Syllabus.

JOSEPH F. FIELD, APPELLANT, v. OLIVER DE COMEAU, ET AL.*

116 U. S. 187-190. Oct. Term, 1885.

[Bk. 29, L. ed. 596; 34 O. G. 559.]

Affirming *Ibid*, 4 Ban. & Ard. 40.

Submitted December 7, 1885. Decided January 4, 1886.

Particular patent construed and not infringed.

1. Letters patent, No. 155,077, granted to J. F. Field, September 15, 1874, for Improvement in Glove-Fastenings, construed not to cover, broadly, the use of springs to close the wrists of gloves, but only his style of spring combined with the wrists of gloves for that purpose, and, *held*, not infringed by a device consisting of two stiff arms with a spring on one operating on the cam-shaped end of the other to hold them tight when closed a certain distance. (p. 206.)

Appeal from the Circuit Court of the United States for the Southern District of New York.

The history and facts of the case sufficiently appear in the opinion of the court.

Mr. Eugene N. Elliot, for appellant :

If this court should hold that there is sufficient evidence to discuss the question and determine concerning the actual merits in the case, then it is contended that the justice in the lower court plainly erred in the interpretation of the claim of the complainant's patent as compared with the state of the art, and the language of the said claim.

It is an error to assume that there is a substantial difference between the arms of the springs of the complainant's and defendant's inventions when based *only* upon their differences or degrees of resistance of strength, for it must be evident that both are either elastic or stiff according to the amount of material used in their structure.

* See Explanation of Notes, page III.

Opinion of the court.

No springs of *whatever* kind were ever used in the "slit" or "split" portion of a glove in such a manner as to draw the edges in *contact* with each other or to overlap each other as shown and described prior to that in complainant's patent.

It is therefore submitted that the lower court fails to to properly discriminate between the springs or bands *around the wrists* of gloves and those inserted *in the "slits"* or split portions of the gloves for holding the edges together, and furthermore, in view of the fact that no springs of any kind ever existed before the date of the complainant's invention and patent to hold the said "*split portions*" of a glove together, and hence although the arms of the defendant's springs are or may be stiffer than those of the complainant's it is only a matter *degree*, and not a substantial difference, and therefore should be held to be the same in principle and mode of operation, and therefore the decision of the lower court should be reversed.

No counsel appeared for appellees.

Mr. Justice MATTHEWS delivered the opinion of the court:

The appellant, who was complainant below, filed his bill in equity to restrain an alleged infringement by the appellees of letters patent, No. 155,077, for an improvement in glove fastenings issued to him September 15, 1874.

The bill was dismissed at the hearing on the ground that the defendants had not infringed.

The material part of the specification forming part of the letters patent is as follows:

"The object of my invention is to cause a glove to fit closely to the hand and wrist of the wearer without the use of buttons or other fastenings; and I attain this object by extending a spring, A, entirely around the split portion B of the glove, in the manner plainly shown in Figure 1 of the accompanying drawing, so that when released the ends *a a*

Opinion of the court.

of the said spring shall overlap, as shown in Fig. 2, and thus close the glove upon the wrist.

“The spring is entirely concealed within the material of the glove, and may be secured to the latter in any suitable manner; but I prefer to simply stitch it in place, as indicated by the dotted lines *x* in Fig. 1.

“The spring may also be variously shaped; but I prefer to construct it of a single piece of wire, bent to the form shown, as I have ascertained by experiment that a spring of this form is most suitable for the purpose, while it possesses the further advantage of presenting no sharp or abrupt ends, which would be apt to force their way through the material of the glove.

“The edge view, Fig. 3, shows the method of bending the spring to conform to the shape of the hand of the wearer of the glove.

“I am aware that springs have been combined with the wristlets of gloves, but they have always extended entirely around the latter, thus rendering it impossible to fold the glove, which was consequently clumsy and inconvenient to carry in the pocket. This objection, it will be evident, is entirely overcome by my invention.

“I claim

“The combination, substantially as described, of a spring, A, with the split portion, B, of a glove, for the purpose specified.”

The drawings referred to are annexed.

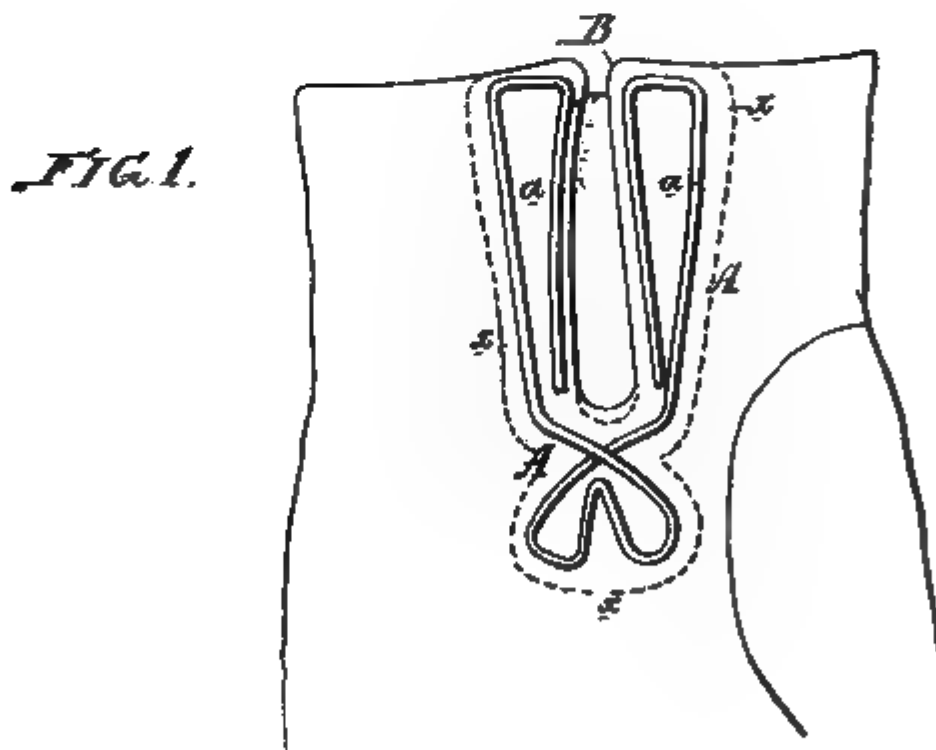
Judge Wheeler holding the circuit court, in deciding the case, stated the grounds of his action in dismissing the bill, in an opinion contained in the transcript, as follows:

“The orator has a patent, No. 155,077, dated September 15th, 1874, for an improvement in glove fastenings, consisting of the combination of a spring inserted in the material of the glove, and extending around the edges of the slit, which permits drawing the wrist of the glove over the hand, and adjusted so as to spring open by the insertion of the

J. F. FIELD.
Glove-Fastenings.

No. 155,077.

Patented Sept. 15. 1874.



Witnesses, Harry Smith
Thomas McLean

Joseph F. Field
by his Attys
Houston and Son

Opinion of the court.

hand and to close automatically and overlap itself, and cause the edges of the slit to overlap each other when the glove is on. The defendants deny infringement. They make and sell for use springs for gloves to be inserted into the material, and with arms extending along each edge of the slit, joined at the apex, working together like the blade and handle of a jack-knife. The only question is, whether the use of such springs is an infringement. The plaintiff stated in the specification of his patent that springs had been combined before with the wrists of gloves, but of a different form. So his patent is not and could not be maintained as a patent for the combination of springs in every form with the wrists of gloves to close them. It proposes to be and is a patent of his style of spring combined with the wrists of gloves for that purpose. The question is, whether the defendants' spring is substantially like his. His is a spring throughout, and pulls constantly upon the parts of the material until they come together and overlap. The defendants' has stiff arms, and pulls the parts together only when closed far enough to have the spring on one arm operate in the opposite direction upon the cam-shaped end of the other, and it pulls the edges apart until the arms are at right angles to each other when opened far enough to cause the spring to act the other way on the cam. When so opened it will not close itself as the orator's will, but has as much tendency to remain open as it has to remain closed after being closed. It is said by an expert called by the orator that if the edge of the cam, which throws the arms apart, was removed, the spring would become more like the orator's in its operation; but he probably failed to notice that the spring operates on the same edge of the cam, although on different sides of its pivot, both in opening and closing the spring; and that if this edge was removed the spring would not move arms together or either way at all. The form of the defendants' spring is different from the orator's; its mode of operation is different, and the result of its oper-

Notes and citations.

ation is somewhat different. It cannot be said to be the same as the orator's, or to be substantially like the orator's. Each got the idea of closing the wrists of gloves by means of springs from others; the orator carries out the idea in his mode and the defendants in theirs, and as neither has control of anything but the particular mode, neither can justly say that the other uses his mode."

For these reasons, which we cannot restate in a more satisfactory manner, the decree of the Circuit Court is affirmed.

116 U. S. 190.

Patent in suit:

No. 155,077. Field, J. F. September 15, 1874. Glove Fastening.

OTHER SUITS ON SAME PATENT:

Field v. De Comeau, 1879. 5 Ban. & Ard. 40; 17 O. G. 568.
Field v. Ireland, 1884. 19 Fed. Rep. 835; 28 O. G. 284.

Cited:**IN TEXT BOOKS:**

2 Abb. Pat. Laws, 1886. p. 269.
Walker on Pats., 2d ed. 1889. p. 264.

This image shows a single page of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. A small dark speck is located near the center of the page, and another smaller one is slightly below it. The edges of the paper are slightly irregular, suggesting it might be a scan of a physical document.

Syllabus.

HIRAM L. BROWN ET AL., APPELLANTS, v. CHARLES F. DAVIS ET AL., Executors of WILLIAM ALLEN, Deceased.*

116 U. S. 237-252. Oct. Term, 1885.

[Bk. 29, L. ed. 659; 34 O. G. 435.]

Reversing Davis v. Brown, 19 Blatch. 263.

Argued December 17, 1885. Decided January 11, 1886.

Particular reissued patent. Complete invention. Equivalent. "Substantially as described." Construction of claim.

1. Claim 2 of reissued letters patent, No. 8,589, granted to Charles F. Davis and William Allen, February 18, 1879, for Improvement in Grain-Drills (original patent, No. 74,515, granted said Davis February 18, 1868,) for "The shoes or hoes of a seed-planter, attached to the main frame, substantially as described, in combination with a lever or its equivalent, whereby they can be shifted at the pleasure of the operator from a straight to a zig-zag line, or *vice versa*," construed and *held*, that the lever or its equivalent, as a mechanical instrument, is made an essential element in claim 2, and dispensing with the lever, and using instead the human hand, is not the use of an equivalent, although in the plaintiffs' machine the hand is applied to work the lever. (p. 229.)
2. Where an inventor put his device "onto two, or maybe three drills," and they worked perfectly, *held*, that it was a complete invention. (p. 230.)
3. The words "substantially as described" in certain claims, *held*, properly to limit them to the mechanism described. (p. 230.)
4. *Held*, that claims 1 and 3 of the reissue, (No. 8,589, C. F. Davis, February 18, 1868,) if construed broadly, could not lawfully have been granted on the original and would be invalid, in view of the delay of eleven years in reissuing, and the accruing of intervening rights to third parties. Claims 4, 5, and 6 limited and not infringed. (p. 230.)

* See Explanation of Notes, page III.

Argument of counsel.

[Citations in the opinion of the court:]

Davis v. Brown, 19 Blatch. 263. p. 226.

Water-Meter Co. v. Desper, 101 U. S. 332 [12 Am. & Eng. 380.] p. 229.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.] p. 229.

Fay v. Cordesman, 109 U. S. 408 [15 Am. & Eng. 1.] p. 229.

Sargent v. Hall Safe and Lock Co., 114 U. S. 63 [15 Am. & Eng. 573.] p. 229.

Appeal from the Circuit Court of the United States for the Northern District of New York.

The history and facts of the case fully appear in the opinion of the court.

Messrs. B. F. Thurston, E. E. Wood, and F. L. Brown, for appellants :

We think the record proves, and the devices themselves clearly demonstrate the fact, that without the lock-lever, which is made a specific element of the second claim, the hoes cannot be shifted on the machine while it is in operation. The second claim was conceded not to be infringed by counsel when they took their *prima facie* case.

The first and third claims of the reissue are invalid unless limited to the peculiar crank-shaft shown in the patent, and the second claim should be limited to that shaft in combination with the peculiar lock-lever.

We insist that the true construction of the second claim limits it to the use of the lock-lever, H, which is named as a specific element of the claim.

The pull-bar is not the equivalent of the pull-bar and lever combined.

It is manifest from the testimony in the record that without the peculiar lock-lever, H, operated through a rack and pinion, or other equivalent device, the Davis crank-shaft cannot be moved while the drill is in operation. It requires the power of a lever to move the hoes in the ground, and it requires a lock attached to this lever to hold the crank-shaft in either of its positions, otherwise there will be constant vibratory motion to the hoes.

Argument of counsel.

It is not just to construe this second claim so as to include a single push or pull bar as an equivalent for the lock-lever.

There is no authority in the law for saying that you may reason out an element of a combination claim. Take off the lock-lever and the power to move the hoes in operation is gone. The hand of the operator cannot change them.

We submit that appellants' machine does not infringe either of the first three claims of the reissued patent, because they use a differently organized device operating in a different manner, producing practically different results.

We think it is conclusively proved by the testimony that appellants do not infringe because their device is practical, while the patentee's shifting devices are not practical and would not meet the wants of the manufacturer or user.

The settled rule is that to constitute infringement the defendant must have the same organized mechanism, operating in the same manner, and producing the same result as that shown in appellees' patent. *Clark v. Copeland*, 2 Fish. 227; *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 278 [11 Am. & Eng. 364;] *Foot v. Silsby*, 2 Blatch. 270; *Fuller v. Yentzer*, 94 U. S. 288 [11 Am. & Eng. 138.] No attempt has been made on the part of appellees to prove infringement under this rule. The remarks of Judge Grier, in the case of *Burr v. Duryee*, 1 Wall. 573 [7 Am. & Eng. 224,] are a fitting answer to appellees' position in the case at bar. He says: "The argument used to show infringement assumes that every combination of devices in a machine which is used to produce the same effect, is necessarily an equivalent for any other combination used for the same purpose. This is a flagrant abuse of the term equivalents."

Appellants do not infringe because, in view of the state of the art, the Davis patent is limited to the peculiar devices described therein. This is a very old proposition of law, and peculiarly applicable to this case.

Argument of counsel.

*Messrs. Sardius D. Bently and William F. Cogswell,
for appellees :*

Under the doctrine of *McCormick v. Talcott*, 20 How. 402 [6 Am. & Eng. 410,] and *Railway Co. v. Sayles*, 97 U. S. 554 [12 Am. & Eng. 121,] the appellees have a right to treat as infringers all who make machines operating on the same principles and performing the same function as Davis' rack bar or push bar, by analogous means or equivalent combinations.

The burden of proof of want of novelty rests upon him who avers it ; and as was said by this court in *Coffin v. Ogden*, 18 Wall. 124 [9 Am. & Eng. 125:] "Every reasonable doubt should be resolved against him." Novelty can only be negatived by proof which puts the fact beyond a reasonable doubt.

Wood v. Mill Co., 4 Fisher, 560 ; *Hawes v. Antisdel*, 2 Ban. & Ard. 10 ; *Bignall v. Harvey*, 5 Ban. & Ard. 636.

Legal cause existed for the surrender and reissue of Davis' patent.

See *Battin v. Taggart*, 17 How. 74 [6 Am. & Eng. 243 ;] *Powder Co. v. Powder Works*, 98 U. S. 136 [12 Am. & Eng. 201.]

Davis' original patent was inoperative, because of a defective or insufficient specification. To cure this defect he surrendered his patent and took the reissue.

Reed v. Chase, 25 Fed. Rep. 94.

It is not essential to a valid surrender and reissue that the original patent be wholly inoperative or wholly invalid.

Powder Co. v. Powder Works, *supra* ; *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290 ;] *Wilson v. Coon*, 18 Blatch. 532.

The error arose in the way pointed out by the statute as the lawful condition of granting a reissue, namely : by inadvertence, accident, or mistake, and without any fraudulent or deceptive intention on the part of the patentee.

The decision of the Commissioner, within the limits of the

Argument of counsel.

power conferred on him in this behalf, is final and cannot be attacked collaterally.

Seymour v. Osborne, *supra*; Russell v. Dodge, 93 U. S. 460 [10 Am. & Eng. 495;] Ball v. Langles, 102 U. S. 128 [12 Am. & Eng. 508.]

The reissue is not subject to the criticism that it was an expansion of the original patent. It simply points out more clearly and distinctly the invention shown in the original, and claims more conformably to the rights of the patentee what was therein shown.

Powder Co. v. Powder Works, *supra*.

The presumption arising from the decision of the Commissioner can only be overcome by clearly showing, from a comparison of the original specification with that of the reissue, that the former does not substantially describe what is described and claimed in the latter.

Smith v. Goodyear Dental etc. Co. 93 U. S. 486 [11 Am. & Eng. 1.]

The reissue is valid notwithstanding the lapse of time between the date of the original and that of the reissue.

The question was not mooted at the circuit; and as this court has repeatedly said that no precise limit of time can be fixed and laid down for all cases.—Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322]—each case must be determined upon its own facts.

No such inexcusable and unreasonable delay appears as ought to deprive defendants in error of the benefit of their patent.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454;] Smith v. Goodyear Dental etc. Co., *supra*.

Should the court hold the reissued patent invalid in any of its claims, the defendants in error may fall back upon the second, fourth, and fifth clauses of the reissue, which are substantially the same as the claims of the original, and are each and all infringed by plaintiffs in error.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.]

Opinion of the court.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity, brought in the Circuit Court of the United States for the Northern District of New York, on reissued letters patent No. 8,589, granted to Charles F. Davis and William Allen, February 18th, 1879, for an "improvement in grain drills," the original patent, No. 74,515, having been granted to said Davis, as inventor, February 18th, 1868. The application for the reissue was filed January 24th, 1879. The defences set up in the answer are, want of utility and novelty, invalidity of the reissue, and non-infringement. The specifications of the original and reissued patents are here placed side by side, the parts in each not found in the other being in italic:

Original.

"Be it known that I, Charles F. Davis, of Auburn, *in the* County of Cayuga, *and* State of New York, have invented certain new and useful improvements in grain drills; *and I do hereby declare* the following *to be* a full, clear, and exact description *of the same*, reference being had to the accompanying drawings, making *a* part of this specification, in which Figure 1 represents a *top* plan of the drill, with the seed-box removed, but its position shown by *red* lines, to show the parts underneath it. *Figure 2* represents the crank rod or shaft to which the front ends of the drag-bars are attached, *when* detached from the machine. *Figure 3* represents an end view of the drill, with the wheel removed, to show the

Reissue.

"Be it known that I, Charles F. Davis, of Auburn, County of Cayuga, State of New York, have invented certain new and useful improvements in grain drills, *of which* the following *is* a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which Figure 1 represents a plan *or top view* of the drill, with the seed-box removed (but its position shown by *dotted* lines,) to show the parts underneath it. *Fig. 2* represents the crank rod or shaft to which the front ends of the drag-bars are attached, detached from the machine. *Fig. 3* represents an end view of the drill, with the wheel removed to show the parts behind it, and representing, by *full and*

Opinion of the court.

parts behind it, and representing, by *black*, dotted and *red* lines, the several operative parts and their positions under the changes of the machine or its parts. Similar letters of reference, *where they occur in the separate figures*, denote *like* parts in all of the drawings.

The object and purpose of my invention *are* to shift or change the seeding shoes or hoes from a straight to a zigzag line, and *vice versa*, and, further, to so hang the shoes or hoes, as, in addition to the shifting process, to admit of being raised separately, or the whole series together, as may be found necessary.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings:

Upon an axle, A, supported on the usual carrying wheels, B B, is mounted a main frame, C, and on the main frame a seed-box, D, the slides of which may be operated in any of the well-known ways. In bearings, E, in the front portion of the main frame, is hung, so as to rock or turn therein, a zigzag or crank-shaft, F, (shown detached in Fig. 2,) and to the cranks or wrists, *a a a*, of this shaft are connected, *serialim*, the drag-bars, *b b b*, by means of bows or yokes, *c*, each bow

dotted lines, the several operative parts, and their positions under the changes of the machine or its parts. Similar letters of reference denote *corresponding* parts in all the figures.

The object and purpose of my invention *is* to shift or change the seeding shoes or hoes from a straight to a zigzag line, and *vice versa*, and, further, to so hang the shoes or hoes, as, in addition to the shifting process, to admit of being raised separately, or the whole series together, as may be found necessary.

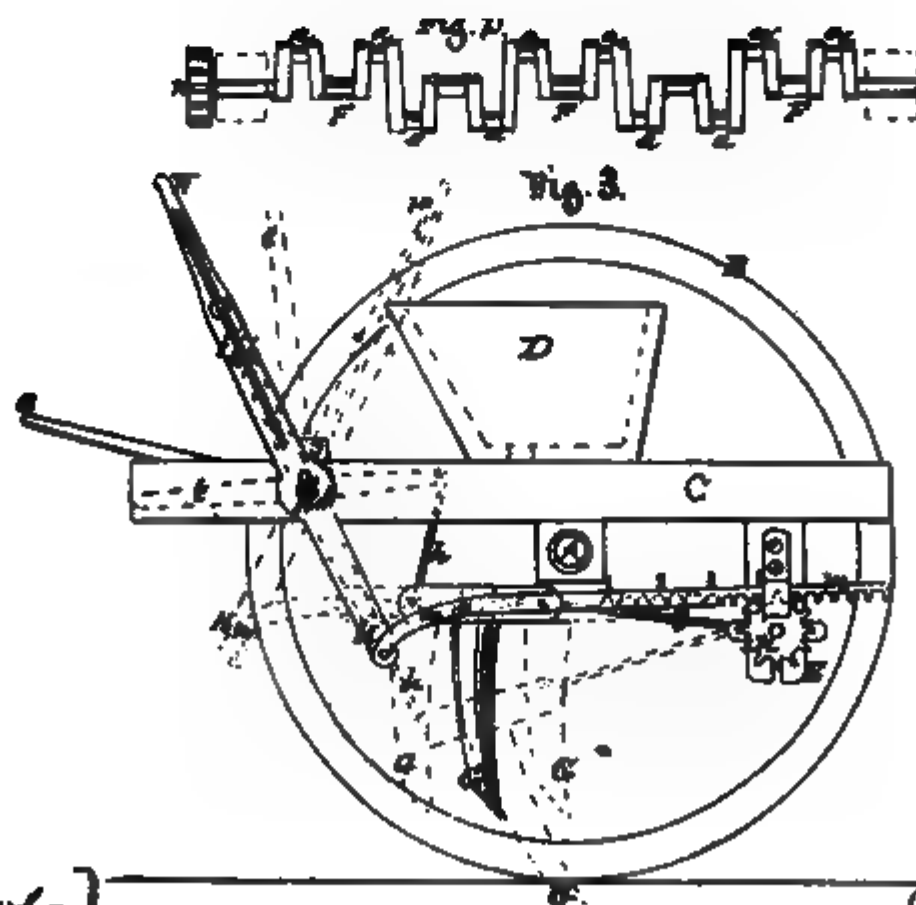
To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings:

Upon an axle, A, supported on the usual carrying wheels, B B, is mounted a main frame, C, and on the main frame a seed-box, D, the slides of which may be operated in any of the well-known ways. In bearings, E, in the front portion of the main frame, is hung, so as to rock or turn therein, a zigzag or crank-shaft, F, (shown detached in Fig. 2,) and to the cranks or wrists, *a a a*, of this shaft are connected, *serialim*, the drag-bars, *b b b*, by means of bows or yokes, *c*, each bow

Charles F. Davis,
Improvement in Grain Drills.
Fig. 1.

PATENTED
FEB 18 1868

7451



Witnesses
Spencer Poul
Hylle Dodge.

Inventor.
Charles F. Davis.
By atty A. B. Staughton.

Opinion of the court.

or yoke taking two of said wrists, as shown in Fig. 1. To the rear ends of these drag-bars, *b*, are attached the shoes or hoes, *G*, in any of the usual well-known ways. In the projecting rear portion of the main frame *C* there is hung a shaft, *d*, upon which there is a lever, *e*, by which it can be rocked or rolled in its bearings. At suitable distances upon this shaft *d* there is placed a series of levers, *f f*, one for each shoe or hoe, which are kept in their proper positions on the shaft by pins *1, 1*, or other suitable devices, but which can be moved independent of the shaft, or of each other, or all together, as will be explained. The levers *f* have a hub or swell, *g*, at their central portions, where they are slipped on to the shaft *d*; and into each one of these hubs is set a pin, *2*, which is above the pins *1, 1*, in the shaft, so that each lever can be turned upon the shaft; but when the shaft is rocked or turned, then all the levers are worked simultaneously. To the forward ends of these levers *f* the shoes or hoes are respectively connected by a link or hinged rod, *h*, the rearward, projecting ends of said levers serving as handles for the operator to seize and work separately, when necessary to do so, or he can raise the whole series by seizing

or yoke taking two of said wrists, as shown in Fig. 1. To the rear ends of these drag-bars, *b*, are attached the shoes or hoes, *G*, in any of the usual well-known ways. In the projecting rear portion of the main frame *C* there is hung a shaft, *d*, upon which there is a lever, *e*, by which it can be rocked or rolled in its bearings. At suitable distances upon this shaft *d* there is placed a series of levers, *f f*, one for each shoe or hoe, which are kept in their proper positions on the shaft by pins *1, 1*, or other suitable devices, but which can be moved independent of the shaft or of each other, or all together, as will be explained. The levers *f* have a hub or swell, *g*, at their central portions, where they are slipped on to the shaft *d*; and into each one of these hubs is set a pin, *2*, which is above the pins, *1, 1*, in the shaft, so that each lever can be turned upon the shaft; but when the shaft is rocked or turned, then all the levers are worked simultaneously. To the forward ends of these levers *f* the shoes or hoes are respectively connected by a link or hinged rod, *h*, the rearward projecting ends of said levers serving as handles for the operator to seize and work separately, when necessary to do so, or he can raise the whole series by seizing

Opinion of the court.

and working the lever *e*. One end of the shaft *d* projects through the timber of the main frame, for convenience of placing the parts, and upon it is a lever, *H*, and a spring-locking lever, *i*, connected with it, both of which levers the operator may grasp at once, and by pressure first unlock the catch, and then move the main lever *H* and the shaft *d*, as well as the parts connected with it. The catch or locking lever *i* takes into or against *a* stop-plate, *j*, on the main frame, when not otherwise controlled. The upper portion of the lever *H* serves as a handle to work it by, and to the lower end of it is pivoted a rack-bar, *m*, which takes into a pinion, *n*, fastened on the end of the crank or zigzag shaft *F*, and, when the pinion *n* is turned, the crank-shaft is also turned, and, as it is turned, it shifts the shoes or hoes into a zigzag or a straight line, as the case may be. When the lever *H*, and the zigzag shaft *F*, and their several connected and operative parts, are in the positions shown by the *black* lines in Figs. 1 and 3, the shoes or hoes *G* are then in a straight line across the machine; but, when the lever *H* is shifted into the position shown by the *red* lines in Fig. 3, it turns the shaft and moves the parts connected

and working the lever *e*. One end of the shaft *d* projects through the timber of the main frame, for convenience of placing the parts, and upon it is a lever, *H*, and a spring-locking lever, *i*, connected with it, both of which levers the operator may grasp at once, and by pressure first unlock the catch, and then move the main lever *H* and the shaft *d*, as well as the parts connected with it. The catch or locking lever *i* takes into or against *the* stop-plate, *j*, on the main frame, when not otherwise controlled. The upper portion of the lever *H* serves as a handle to work it by, and to the lower end of it is pivoted a rack-bar or connecting rod, *m*, which takes into a pinion, *n*, fastened on the end of the crank or zigzag shaft *F*, and, when the pinion *n* is turned, the crank-shaft is also turned, and, as it is turned, it shifts the shoes or hoes into a zigzag or a straight line, as the case may be. When the lever *H*, and the zigzag shaft *F*, and *the connecting-bar m*, and their several connected and operative parts, are in the positions shown by the *full* lines in Figs. 1 and 3, the shoes or hoes *G* are then in a straight line across the machine; but, when the lever *H* is shifted into the position shown by the *dotted* lines in

Opinion of the court.

with them, and the shoes or hoes will then stand in a zigzag line across the machine, as shown by the *red* lines, or in what may be termed two lines, one in advance of the other; and, that the shoes or hoes may be thus moved into one or two lines, and still be susceptible of being raised up separately, or in their series capacity, their connections and attachments must all be hinged or yielding. When there is an odd number of shoes or hoes on the machine, the odd one should be in the rear series, in which case there would be no necessity of locking the lever H when the shoes *were* so arranged, as the greater resistance on the greater number would always keep them so. But, if an even number of shoes be used, and an equal number in each row, then the lever would have to be locked or fastened in both of its positions.

It is obvious that other mechanical devices may be used for shifting the shoes or hoes from a straight into a zigzag line, or *vice versa*. I have devised several ways of accomplishing this movement, as, for instance, a sheave, pulley, or chain-wheel may be keyed to the end of the crank-shaft, and to this

Fig. 3, it turns the shaft and moves the parts connected with them, and the shoes or hoes will then stand in a zigzag line across the machine, as shown by the *full* lines, or in what may be termed two lines, one in advance of the other; and, *in order* that the shoes or hoes may be thus moved into one or two lines, and still be susceptible of being raised up separately, or in their series capacity, their connections and *the* attachments must all be hinged or yielding. When there is an odd number of shoes or hoes on the machine, the odd one should be in the rear series, in which case there would be no necessity of locking the lever H when the shoes *are* so arranged, as the greater resistance on the greater number would always keep them so. But, if an even number of shoes be used, and an equal number in each row, then the lever would have to be locked or fastened in both of its positions.

It is obvious that other mechanical devices may be used for shifting the shoes or hoes from a straight into a zigzag line, or *vice versa*. I have devised several ways of accomplishing this movement. *The rack-bar or connecting-bar m may be used for this purpose, and thereby the shoes or hoes may be shifted from*

Opinion of the court.

sheave or wheel a chain may be attached, and, passing around it, *extend thence to the lever*, so that by *working the lever*, the same effect *would* be attained as by the rack and pinion.

Another plan may be as follows: A crank or cross arms may be placed on the turning shaft, and, by means of connecting-rods, *which connect the cranks or arms with the levers*, the shaft may be turned, and the shoes thus thrown into a straight or zigzag line, as may be desired; or, instead of the crank-shaft *to shift the shoes*, the shoes may be united in sets to different bars, which may be straight, both bars being united to cross bars or heads at their ends. Now, by shifting these two bars, *they will* shift the shoes attached to them, *and change them* into the positions hereinabove described. When the shoes are set in a zigzag line, as above mentioned, and are in that position raised up, a pin, 3, in the extreme end of the shaft *d*, will take against a pin, 4, in the lever H, and thereby

a straight to a zigzag line, or vice versa, said connecting-bar m being held in position, if desired, by any of the usual mechanical devices for that purpose; second, by means of a sheave, pulley, or chain-wheel, which may be keyed to the end of the crank-shaft, and to this sheave or wheel a chain may be attached, and, passing around it, so that, by means thereof, the same effect can be attained as by the rack and pinion.

Another plan may be as follows: A crank or cross arms may be placed on the turning shaft, and, by means of a connecting rod or rods, the shaft may be turned *by the operator*, and the shoes thus thrown into a straight or zigzag line, as may be desired; or, instead of the crank-shaft, the shoes may be united in sets to different bars, which may be straight, both bars being united to cross bars or heads at their ends. Now, by shifting *the relations of* these two bars, *and by the means aforesaid, or by the connecting-rod m, the operator can* shift the shoes *or hoes* attached to them into the positions hereinabove described. When the shoes are set in a zigzag line, as above mentioned, and are in that position raised up, a pin, 3, in the extreme end of the shaft *d*, will take against a pin, 4, in the lever

Opinion of the court.

shifting the hoes into more nearly a straight line, as they rise, or into quite a straight line, depending upon the extent to which they are raised.

Having *thus fully* described my invention, what I claim *therein* as new and desire to secure by letters patent is:

1. *So attaching the shoes or hoes of a seed-planter, to the main frame, as that, by means of a lever, or its equivalent, said shoes may be shifted from a straight to a zigzag line, or vice versa, at pleasure, substantially as described.*

2. *I also claim, in combination with a series of shoes or hoes that are capable of being changed from a straight to a zigzag line, or vice versa, the so connecting of said shoes, by independent levers, to the lifting-bar, as that they may be raised by the operator individually, or as a whole, substantially as described.*

3. *I also claim hinging the shoe to both its drag-bar and its individual lever, so that the shoe may be raised and lowered in either of its changed positions, by a lever that is permanently located substantially as described."*

H, and thereby shifting the hoes into more nearly a straight line, as they rise or into quite a straight line, depending upon the extent to which they are raised.

Having *now* described my invention, what I claim as new and desire to secure by letters patent is:

1. *The shoes or hoes of a seed-planter, attached to the main frame substantially as described, whereby they may be simultaneously shifted from a straight to a zigzag line, or vice versa, by a single movement.*

2. *The shoes or hoes of a seed-planter, attached to the main frame, substantially as described, in combination with a lever or its equivalent, whereby they can be shifted, at the pleasure of the operator, from a straight to a zigzag line, or vice versa.*

3. *The shoes or hoes of a seed-planter, attached to the main frame, substantially as described, in combination with a rod or its equivalent, whereby they can be shifted from a straight to a zigzag line, or vice versa.*

4. *A series of shoes or hoes that are capable of being changed from a straight to a zigzag line, or vice versa,*

Opinion of the court.

in combination with independent levers, connecting said shoes or hoes with the lifting-bar, whereby they can be raised by the operator individually or as a whole, substantially as described.

5. *The shoe hinged to both its drag-bar and its individual lever, so that it can be raised or lowered, in either of its changed positions, by a lever that is permanently located substantially as described.*

6. *In combination with a series of shoes or hoes that are capable of being changed by the operator at the rear of the machine, from a straight to a zigzag line, or vice versa, a shaft and lifting lever connected therewith, whereby the whole series can be raised at once by the operator, to pass obstructions, substantially as described."*

The cause was heard in the Circuit Court, on pleadings and proofs, and a decision rendered in May, 1881 (Davis v. Brown, 19 Blatch. 263,) in pursuance of which an interlocutory decree was entered, in June, 1881, declaring the reissued patent to be valid, and to have been infringed as to all its claims, and awarding a recovery of profits and damages and a perpetual injunction. On the report of a master, a final decree was entered in February, 1882, by which the plaintiffs recovered \$5,689.91, as damages and costs. The defendants have appealed to this Court.

The specification of the original patent stated the purpose of the invention to be to change the seeding shoes or hoes from a straight to a zigzag line, and *vice versa*; and also,

Opinion of the court.

to so hang the shoes or hoes as, in addition to the shifting process, to allow the shoes or hoes to be raised all together, or any one separately. The mechanical means described in that specification, for shifting the shoes, are these: in the front part of the machine is a rotating shaft with cranks on it so arranged that the shaft does not have a straight continuous axis, but has sets of axes in different lines, alternating so that, yokes being attached, each to two of the cranks, and each two of the cranks having axes in a different line from the line of the axes of the next two adjoining cranks, the yokes being of substantially equal length, and being connected by drag-bars, at the rear ends of the drag-bars, to the shoes, a rotating motion given to the crank-shaft will shift the shoes, by moving all of them, each alternate shoe moving in an opposite direction from that in which the shoe next to it moves, and thus a space being opened or closed, of double the distance through which any shoe travels. To rotate the crank-shaft, there is a cross-shaft in the rear of the machine, on the end of which is an upright lever, which extends upwards to form a handle, and has pivoted to it below a bar which extends forward and the forward end of which is formed into a rack, which works into a pinion on the end of the crank-shaft. By moving the lever, the rack and pinion are worked and the crank-shaft is rotated and the shoes are shifted. The extent of the rotating movement of the crank-shaft is about half a circle, back and forth. The original specification says that instead of employing the crank-shaft, the shoes may be united in sets to different bars, which may be straight, both bars being united to cross-bars or heads, at their ends; and that, by shifting these two bars, the shoes attached to them will be shifted. But there is no more specific description of mechanism for the purpose, nor any drawing of such mechanism.

In the defendant's machine, every alternate shoe is connected with an immovable part of the frame, and every

Opinion of the court.

other alternate shoe is connected with a swinging cross-bar, which hangs down so as to have a motion back and forth in the arc of a circle, by reason of its being hung in bearings in the side of the frame. A rod extends from near the middle of the width of the swinging cross-bar to the rear part of the frame, behind the line from which the shoes are suspended, which rod is supported in the center of its length, and terminates, at its rear end, in a handle, so that an operator can work it and, by pulling it, shift simultaneously all the shoes that are attached to the swinging cross-bar. Two coiled springs are so arranged that when the rod is pulled the springs are compressed; and when the rod is released the action of the springs tends to throw the swinging cross-bar and the shoes attached to it towards the front of the frame again, restoring them to the position from which the pulling of the rod moved them. Thus, only alternate shoes are shifted, but the positions of the toes of the shoes, relatively to each other, can be simultaneously changed, and a wider space, in a straight line, be opened between any two toes at any time. The shoes are so set that their toes are never in a straight line across, but, when nearest to each other, are somewhat out of a straight line, and the pulling of the rod causes the distance between them to increase. The shoes which move in increasing such distance do so through the rotating motion to and fro of the swinging cross-bar to which they are attached, such motion being imparted by the pulling, at the rear of the machine, of the rod attached to the swinging cross-bar. In the plaintiffs' machine, the shoes which move, in increasing such distance do so through the rotating motion to and fro of the crank-shaft to which they are attached, such motion being imparted by the pushing at the rear of the machine of the rod that carries the rack, the rod being worked by a lever.

An examination of the claims of the original and reissued patents shows that claim 2 of the reissue is substantially the same as claim 1 of the original; that claim 4 of the reissue

Opinion of the court.

is substantially the same as claim 2 of the original; and that claim 5 of the reissue is substantially the same as claim 3 of the original.

The Circuit Court held that claim 2 of the reissue was infringed, although in the defendants' machine there is no lever such as the lever H of the patent, and no equivalent or substitute for it. The view taken was, that claim 2 was infringed, because the defendants use a rod, the end of which is pushed and pulled by the hand of the operator, while in the patent the lever H pulls and pushes the end of the rod. But the lever or its equivalent as a mechanical instrument is made an essential element in claim 2, and dispensing with the lever and using instead the human hand is not the use of an equivalent, although in the plaintiffs' machine the hand is applied to work the lever. *Water-Meter Co. v. Desper*, 101 U. S. 332 [12 Am. & Eng. 380;] *Gage v. Herring*, 107 U. S. 640 [14 Am. & Eng. 454;] and *Fay v. Cordesman*, 109 U. S. 408 [15 Am. & Eng. 1;] *Sargent v. Hall Safe and Lock Co.*, 114 U. S. 63 [15 Am. & Eng. 573.]

In order to determine what construction ought to be given to the other claims of the reissue, it is necessary to consider an invention made by one Powers, at Madison, Wisconsin, in 1862, the invention of Davis being carried back only to September, 1866. During the winter of 1861-2, and the spring of 1862, Powers was selling, at Madison, grain drills with iron drag-bars. During the season of 1862, noticing the working of drills in the field, he conceived the idea that the shoes could be put into single and double ranks by a more easy method than that then used. He worked out a plan and made a model of it and applied for a patent, November 10th, 1862. The patent was ordered to issue December 6th, 1862, but was never issued. The reason is not stated. The specification filed states that the "invention consists of a device to enable the shovels or plows of a drill to be set in single or double rows or ranks with greater ease

Opinion of the court.

and facility than hitherto." The method described and shown in the drawings is to have a cross row of stationary shovels, and a cross row of other shovels, attached to a cross-bar which is arranged, at each end of it, so as to slide to the extent of eight inches to and fro, in a groove. Thus, two rows may be made, or the sliding cross-bar may be set at a point where all the shovels will be in a line, and one row be formed. The movable cross-bar is moved by hand and secured, when set, by bolts. The claim covers "the method of double and single ranking the drill-teeth, by the adjustment of the sliding cross-bar A, to which are attached the alternate drill-teeth or shovels, to different positions between the side pieces of the frame." The description states that "by this device, double or single ranking can be effected in a moment, instead of the more tedious process of other similar machines," and that "double and single ranking is a highly important feature in a drill, to adapt it to different soils and circumstances." Powers put this shifting arrangement "on to two or maybe three drills" which he had on hand. He testifies to the use of two of them and says they worked perfectly, so far as changing the rank of the drill was concerned. This was a completed invention. The idea of changing the relative positions of the shoes by having one row of them stationary and moving the other, which is the idea developed in the defendant's machine, was fully embodied in Powers' machine. It has no lever and rod to do the work of the hand in moving the sliding cross-bar, and that cross-bar was held in position, when set, by bolts.

In view of this invention of Powers, we are of opinion that the invention of the Davis patent must be limited, so far as the shifting apparatus is concerned, to the special arrangement of the rotating crank-shaft described, and shown in the drawings. The words "substantially as described" found in each of the first two claims of the original patent, properly confined those claims to the shifting mechanism de-

Opinion of the court.

scribed. If claim 1 of the reissue is given a construction which includes any arrangement for shifting not substantially using a rotating crank-shaft, it becomes a claim which could not lawfully have been granted in the original patent; and, as a claim in a reissued patent, it is invalid, within the defences set up in the answer, because the application for the reissue was made nearly eleven years after the original patent was granted, and after machines effecting the shifting by other means than a rotating crank-shaft had gone into use subsequently to the date of the original patent, and no sufficient excuse is given for the laches and delay. The same remarks apply to claim 3 of the reissue.

In view of the rulings of this court on the subject of reissued patents, made since the decision in this case was made by the court below, in May, 1881, this case must be considered in view of the fact that the new matter introduced into the specification of the reissue was put in for the purpose of reaching machines which the claims of the original patent would not reach, and of laying a foundation for claims 1 and 3 of the reissue. The inventor and patentee, Davis, distinctly says this, in his testimony. The principal interpolation is in these words: "The rack-bar or connecting-rod *m* may be used for this purpose, and thereby the shoes or hoes may be shifted from a straight to a zigzag line, or *vice versa*, said connecting-bar *m* being held in position, if desired, by any of the usual mechanical devices for that purpose." In the original specification *m* is called a "rack-bar," because it is pivoted at one end to the lower end of the lever H, and has on its other end a rack taking into a pinion on the end of the crank-shaft. But, in the reissue, *m* is called "a rack-bar or connecting-rod." Again, in the reissue, the reference to the lever H, as connected with and working the chain to be used with the sheave or wheel, in the second suggested alternative means of shifting, is erased, so as not to make the use of the lever H necessary. Before these changes, the defendant's machine, which has no lever

Notes and citations.

and no rotating crank-shaft, would not have been within the scope of the original claims, but, if the rack-bar were to become a connecting-rod, it was thought it might cover the rod in the defendant's machine. Claim 3 of the reissue was framed on this view, of shifting by a rod alone, while claim 1 is made so broad as to seem to claim shifting by any means, by a single movement.

As to claims 4, 5, and 6, of the reissue, the shifting mechanism of the patent, with its rotating crank-shaft, must, in view of the Powers invention, be considered as an element in each claim; and that mechanism is not used by the defendants.

It follows, from these views, that *the decree of the Circuit Court must be reversed and the case remanded, with a direction to dismiss the bill, with costs.*

116 U. S. 252.

• **Notes:**

2. "Complete invention :"

Smith & Griggs Mnfg. Co. v. Sprague, 123 U. S. 249.

3. "Substantially as described." Effect on construction of claim :

Winans v. Denmead, 15 How. 330 [6 Am. & Eng. 107.]

Seymour v. McCormick, 19 How. 96 [6 Am. & Eng. 282.]

Klein v. Russell, 19 How. 433 [9 Am. & Eng. 244.]

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.]

Garratt v. Seibert, Bk. 21 L. ed. 956 [9 Am. & Eng. 161.]

Hailes v. Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.]

Corn-Planter Patent, 23 Wall. 181 [10 Am. & Eng. 1.]

Railway Co. v. National Car Brake Co., 110 U. S. 222 [15 Am. & Eng. 124.]

Matthews v. Iron-Clad Mnfg. Co., 124 U. S. 347.

Weir v. Morden, 125 U. S. 98.

Telephone Cases, 126 U. S. 1.

Sargent v. Burgess, 129 U. S. 19.

Notes and citations.

4. Reissue where adverse rights have accrued :

Grant v. Raymond, 6 Pet. 218 [4 Am. & Eng. 245.]
Stimpson v. Railroad, 4 How. 380 [4 Am. & Eng. 398.]
Battin v. Taggart, 17 How. 74 [6 Am. & Eng. 243.]
James v. Campbell, 104 U. S. 356 [13 Am. & Eng. 341.]
Clements v. Odorless Co., 109 U. S. 641 [15 Am. & Eng. 44.]
Torrent & Arms Lumber Co. v. Rodgers, 112 U. S. 659
[15 Am. & Eng. 396.]
Coon v. Wilson, 113 U. S. 268 [15 Am. & Eng. 504.]
White v. Dunbar, 119 U. S. 47 [p. 397 *post.*]
Newton v. Furst & Bradley Mnfg. Co., 119 U. S. 373 [p.
450 *post.*]
Parker & Whipple v. Yale Clock Co., 123 U. S. 87.
Flower v. City of Detroit, 127 U. S. 563.

Patent in suit :

No. 74,515. Davis, C. F. February 18, 1868. Reissue,
No. 8,589. February 18, 1879. Grain Drill.

OTHER SUITS ON SAME PATENT:

Davis v. Brown, 1881. 19 Blatch. 263; 9 Fed. Rep. 647; 20 O.
G. 1021.

Cited :**IN CIRCUIT COURTS IN :**

United States Axle Lubricator Co. v. Wurster, April, 1889. 38
Fed. Rep. 426.

Notes and citations.

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. p. 263.

Walker on Pats., 2d ed. 1889. pp. 271, 274.

Syllabus.

JOHN SHEPARD, HENRY NORWELL AND ROBERT FERGUSON, as SHEPARD, NORWELL & COMPANY, APPELLANTS, v. EDWARD C. CARRIGAN, Administrator of HELEN M. MACDONALD, Deceased.*

116 U. S. 593-598. Oct. Term, 1885.

[Bk. 29, L. ed. 723 ; 34 O. G. 1157.]

Argued January 20, 21, 1886. Decided February 1, 1886.

Particular patent. Disclaimer. File-wrapper and contents. Limitations imposed by Patent Office prevent reissue with broader claim. Patentee bound by his claim.

1. Letters patent, No. 155,534, granted September 29, 1874, to Helen M. Macdonald, for an Improvement in Dress-Protectors, construed and limited in view of disclaimer, contained in file-wrapper and contents, and *held*, to include a fluted or plaited band or border as one of the essential elements of the invention, and is not infringed by a skirt-protector manufactured under letters patent, No. 161,012, granted March 23, 1875, to Theodore D. Day, having neither plaited nor fluted bands or borders. (p. 244.)
2. When an applicant for a patent to cover a new combination is compelled by the rejection of his application by the Patent Office to narrow his claim by the introduction of a new element, he cannot, after the issue of the patent, broaden his claim by dropping the element which he was compelled to include in order to secure his patent. (p. 244.)
3. If an applicant, in order to get his patent, accepts one with a narrower claim than that contained in his original application he is bound by it. (p. 245.)

[Citations in the opinion of the court:]

Leggett v. Avery, 101 U. S. 256 [12 Am. & Eng. 369.] pp. 244, 245.

Goodyear D. V. Co. v. Davis, 102 U. S. 222 [12 Am. & Eng. 524.] p. 244.

Fay v. Cordesman, 109 U. S. 403 [15 Am. & Eng. 1.] p. 244.

Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322.] p. 244.

*See Explanation of Notes, page III.

Statement of the case.

Cartridge Co. v. Cartridge Co., 112 U. S. 624 [15 Am. & Eng. 364.] p. 244.

Sargent v. Hall Safe & Lock Co., 114 U. S. 63 [15 Am. & Eng. 573.] pp. 244, 245.

Appeal from the Circuit Court of the United States for the District of Massachusetts.

Statement of the case by Mr. Justice Woods :

This was a suit to restrain the infringement of letters patent for an improvement in dress protectors, granted to Helen M. Macdonald, the intestate of the defendant in error, dated September 29, 1874, upon an application filed May 10, 1873.

The specification of the patent described the invention as follows :

“ My invention relates to protectors for the lower edge of dresses and other garments, and consists of a band or strip of fluted or plaited fabric, either water proof itself or covered or bound with any water proof-material.

“ In the drawing Figure 1 represents a view of a detached portion of the dress protector, and Fig. 2 represents the protector as applied to the bottom of a dress skirt.

“ A is the plaited or fluted band, which is water proof or bound with water-proof material, and *a* is a heading to which it may be secured for better attachment to the garment.

“ Heretofore skirt protectors have been made of a plaited or fluted strip of wigan or other fabric stiffened with starch, which, upon becoming wet, gets limp, loses its shape and absorbs the dirt, besides being objectionable on account of the harsh scraping noise it makes upon the pavement.

“ By my improvement these objections are overcome. The waterproof protector preserves the lower edge of the dress from all moisture on the ground, retains its rigidity and proper shape, giving a graceful hang to the skirt, and can easily be cleaned.”

Both the figures referred to in the specification represented skirt protectors made with plaited or fluted bands.

HELEN M. MACDONALD.

Dress-Protectors.

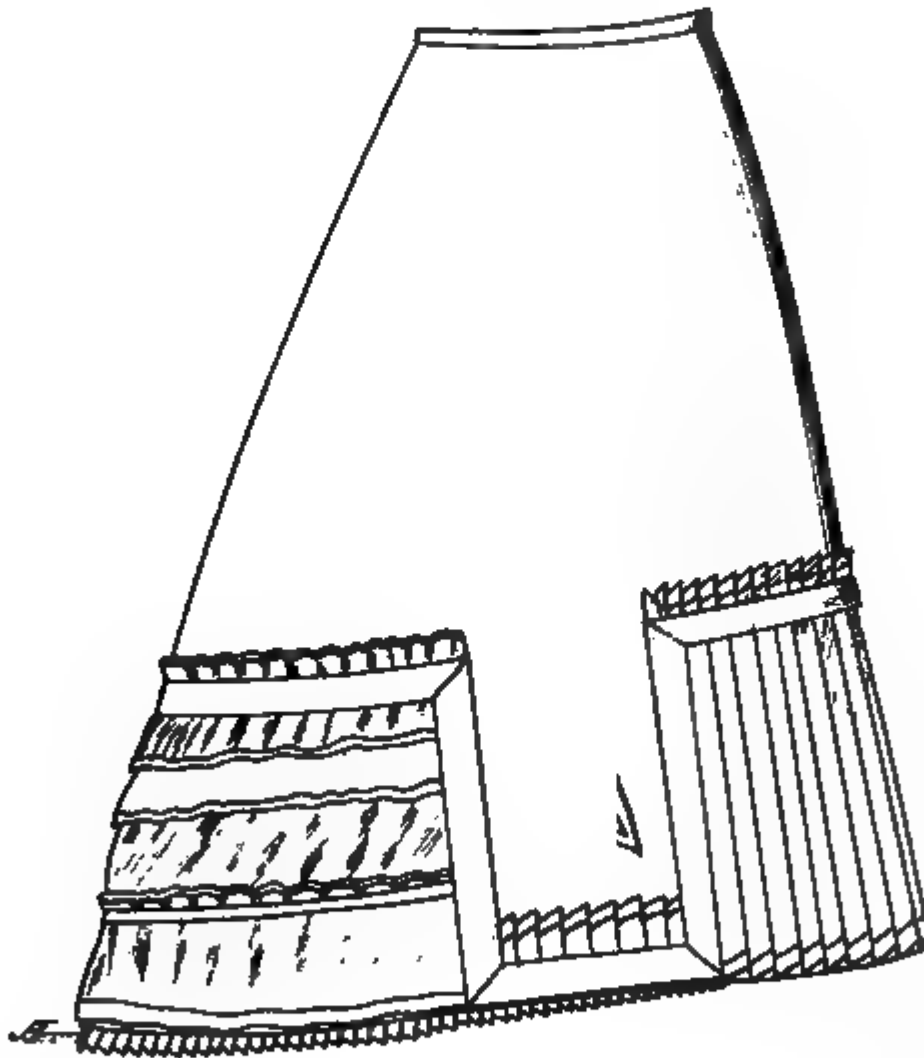
No. 155,534.

Patented Sept. 29, 1874.

Fig. 1.



Fig. 2.



Witnesses.

Charles Martin.
George J. Larny.

Inventor.

Helen M. Macdonald.

Argument of counsel.

The claim was as follows :

“ As a new article of manufacture, a skirt facing or protector, having a fluted or plaited border, bound with or composed of enameled cloth or water proof material, substantially as and for the purpose set forth.”

On November 9, 1874, the patentee filed in the Patent Office a disclaimer by which she struck out from her claim the words “facing or,” leaving the claim to cover only a skirt protector.

The answer of the defendants denied infringement and denied that Macdonald was the first and original inventor of the improvement described in her patent.

Upon final hearing, the circuit court found the issues were for the plaintiff, and entered a decree in her favor against the defendants for profits and damages; and restrained the latter from selling, to be used, protectors embracing said patented improvement, or any substantial part thereof. From this decree the defendants appealed. After the appeal Macdonald died, and Carrigan, who had been appointed her administrator, was made appellee in her stead.

Mr. Edward N. Dickerson, for appellant :

The patent was granted in the Patent Office only in consequence of the patentee withdrawing the claim to skirt protectors generally, and limiting herself to her peculiar form. Even if the rules of construction permitted the claim to be enlarged beyond the specific form described in the patent and *specifically claimed*, this controlled her.

And, moreover, the patentee herself and her witnesses swore that if the protector were constructed as specified in her patent—that is of enamel cloth—it was simply impracticable, which, although it was false swearing, yet was sufficient for the purpose of defeating her patent when she swore to it herself.

But if her patent covers a plain strip of enameled cloth, then the testimony is conclusive that for many years that kind of protector had been in common use, and she herself

Argument of counsel.

proves it in respect to her own use for several years on four dresses, and it is not the less a strip of plain cloth because its lower edge is reinforced by a rib, patented before her patent.

Messrs. B. F. Butler and F. P. Fish, for appellee :

It is not believed that the defendants will dispute the patentability of the Macdonald invention. It was, as has been shown, an entirely new article ; as soon as it was made it was sold in immense quantities, and infringers appeared to copy it, and to contest the patent. The utility of the article, added to the fact that its want had long been felt, is sufficient proof of its patentability. *Loom Co. v. Higgins*, 105 U. S. 580 [14 Am. & Eng. 70 ;] *Washburn & Moen Mfg. Co. v. Haish*, 4 Fed. Rep. 900 ; *Pennsylvania Salt Co. v. Gugenheim*, 3 Fish. 423 ; *Valve Co. v. Valve Co.*, 113 U. S. 157 [15 Am. & Eng. 460.]

We submit that the Macdonald patent is a *foundation patent*, and as such, according to the well-settled rule, entitled to receive a more liberal construction than patents for combinations of old elements, or for a mere improvement upon an existing article.

McCormick v. Talcott, 20 How. 403 [6 Am. & Eng. 410 ;] *Railway Co. v. Sayles*, 97 U. S. 554 [12 Am. & Eng. 121 ;] *Clough v. Barker*, 106 U. S. 166 [14 Am. & Eng. 211 ;] *Valve Co. v. Valve Co.*, 113 U. S. 157 [15 Am. & Eng. 460 ;] *Duff v. Sterling Pump Co.*, 107 U. S. 639 [14 Am. & Eng. 440 ;] *United Nickel Co. v. Pendleton*, 15 Fed. Rep. 739 ; *Potter v. Stewart*, 18 Blatch. 565 ; *American Bell Tel. Co. v. Spencer*, 8 Fed. Rep. 516 ; *Same v. Dolbear*, 15 Fed. Rep. 454 ; *Tilghman v. Proctor*, 102 U. S. 757 [13 Am. & Eng. 29.]

It is submitted that the ground taken by Judge Blatchford and by Judge Lowell is correct, that the patentee having been the first to invent a practicable skirt protector, is entitled to a broad construction of her patent ; that the use of a fluted or plaited border to the exclusion of any other similar device is a mere matter of descriptive form, and that

Opinion of the court.

the defendants, having copied all the substantial part of her claim, and having taken the gist of her invention, must be held as infringers.

The general rule as to infringement was well stated by Judge Lowell in the case of *Crompton v. Knowles*, 7 Fed. Rep. 204. "The true question always is whether the defendant uses anything which the plaintiff invented."

If there is any exception to this rule it is found in those cases of a narrow patent for a combination of old elements. The present case does not belong to that class, the patent here in suit being for a new article, the first practicable skirt protector ever made, and therefore the general principle so well stated by Judge Lowell applies; for it is unquestionable that the defendants use something which the plaintiff's intestate invented.

Mr. Justice Woods delivered the opinion of the court:

The evidence shows that skirt protectors are made isolated and are sold as distinct articles of manufacture, and not as a part of the dress to which they are to be attached. They are kept in shops for sale singly or by the dozen, and the purchasers use them by sewing them on the inside of the trains of long dresses, near the lower edge. They can be easily detached when worn out and new ones substituted. It is admitted that the defendants sell skirt protectors made under the patent issued to Theodore D. Day, March 23, 1875, for an "improvement in skirt protectors." The improvement of Day is that described in the specification of his patent:

"I use a strip of India rubber that is made with longitudinal ribs, of sufficient size to withstand the wear to which it is subjected; and between these ribs there is a groove that makes the strip light and flexible; and the web of rubber between the ribs receives a line of stitching, by which the protector strip is united to a strip of rubber cloth, muslin, or other suitable material that is to be attached to the inside of the dress at or near the lower edge."

Opinion of the court.

The skirt protectors made under this patent are not made with a fluted or plaited band or border. The defendants insist that, by reason of this fact, they are essentially different from the improvement described in the Macdonald patent, and therefore do not infringe that patent. On the other hand, the plaintiff insists that the fluted or plaited border mentioned in the Macdonald patent is a matter of descriptive form merely and not an essential part of the invention covered by the patent; and that the use of skirt protectors without a fluted or plaited border, but in other respects substantially like the protectors described in the Macdonald patent, is an infringement of that patent. Upon this issue we think the defendants are right.

It appears from the file wrapper and contents in the matter of letters patent granted to Helen M. Macdonald that in the first application for her patent, dated May 6, 1873, the specification described her patent as follows:

“My invention consists of a strip of enameled muslin from two to four inches wide, which may be covered with any dress material, such as silk, cashmere, alpaca, armure, or tamise cloth; it is then formed in plaits, and bound across the top, like samples, said plaits being held in place by one row of machine-stitching through the center. It is then ready to be sewed in the dress skirt.

“My invention protects the dress from being cut or damaged by contact with earth or brick or concrete pavements and sidewalks, said invention being impervious to moisture; it also protects the skirt from being soiled or damaged by mud or dampness of street crossings, sidewalks, etc.

“It also forms a very neat trimming, and improves the hanging of the skirt.”

On May 10th, 1873, Macdonald, for some reason which does not appear, withdrew this specification and substituted the following:

“My invention consists in protecting the lower edge of dresses and other garments by affixing thereto a portion of

Opinion of the court.

water-proofed material, or in water-proofing the material itself; and I claim as my invention the use of water-proofed material, in whatsoever form it now exists or may hereafter exist, for the purpose of protecting the lower edge of all garments from wear and soiling, either from friction or moisture; and refer to the inclosed samples as substantially representing my invention." In this specification all reference to plaits or plaitings is omitted.

The application with the substituted specification was rejected by the Patent Office on August 9th, 1873, and the applicant was referred to the patent issued to James A. McKee, January 10th, 1865, which covered neither a plaited nor fluted band or border as one of its elements. Upon re-examination her application was, on September 9th, again rejected.

On October 9th, 1873, after the second rejection, Macdonald filed an amended specification, in which she described her invention and stated her claim as follows:

"My invention consists in protecting the lower edge of dresses and other garments by affixing thereto a portion of water-proofed or enameled material, or in water-proofing the material itself; and I claim as a new article of manufacture a skirt facing or protector, having a plaited or fluted border bound with or composed of enameled cloth or other water-proof material, substantially as and for the purpose set forth."

On October 30th she was informed by the Patent Office that her application was adjudged to interfere with the pending application, among others, of M. Herbert Chase, and that "the subject matter involved in the interference" was "a skirt protector having a fluted or plaited border." The skirt protector of Chase referred to in the notice of interference was a plaited strip of India rubber. Macdonald prevailed over Chase in the matter of the interference between their two applications, and received the patent for her invention, which is the patent involved in this suit.

Opinion of the court.

This patent, it will be observed, covers a skirt protector merely without including any means or method for attaching it to the dress, the purchaser being left to fasten the protector to the dress in her own way.

It is shown by the evidence in the record that for several years prior to the earliest date assigned by Macdonald for the discovery of her device, in fact as far back as 1857, strips of enameled cloth without fluting or plaiting had been sewed on the bottom of the skirts of ladies' dresses, so as to project below the lower edges, with a view of protecting the inside surface and lower edge.

This fact and the file wrapper and contents of which we have stated the substance, make it clear that the claim and specification of the Macdonald patent must be construed to include, as their language requires, a fluted or plaited band or border as one of the essential elements of the invention. Without this element the patent would not have been issued. The Patent Office decided that without it the invention had been anticipated. Where an applicant for a patent to cover a new combination is compelled by the rejection of his application by the Patent Office to narrow his claim by the introduction of a new element, he cannot after the issue of the patent broaden his claim by dropping the element which he was compelled to include in order to secure his patent. *Leggett v. Avery*, 101 U. S. 256 [12 Am. & Eng. 369 ;] *Goodyear Dental Vulcanite Co. v. Davis*, 102 U. S. 222 [12 Am. & Eng. 524 ;] *Fay v. Cordesman*, 109 U. S. 403 [15 Am. & Eng. 1 ;] *Mahn v. Harwood*, [15 'Am. & Eng. 322 ;] and *Cartridge Co. v. Cartridge Co.*, 112 U. S. 354 [15 Am. & Eng. 364 ;] *Sargent v. Hall Safe and Lock Co.* [15 Am. & Eng. 573.]

In the case of *Fay v. Cordesman*, *ubi supra*, it was said by Mr. Justice Blatchford, who delivered the judgment: "The claims of the patents sued on in this case are claims for combinations. In such claims, if the patentee specifies any element as entering into the combination, either di-

Opinion of the court.

rectly by the language of the claim, or by such a reference to the descriptive part of the specification as carries such element into the claim, he makes such element material to the combination; and the court cannot declare it to be immaterial. It is his province to make his own claim and his privilege to restrict it. If it be a claim to a combination, and be restricted to specified elements, all must be regarded as material, leaving open only the question whether an omitted part is supplied by an equivalent device or instrumentality." So in *Sargent v. Hall Safe and Lock Co.*, *ubi supra*, the same Justice said: "In patents for combinations of mechanism, limitations and provisos imposed by the inventor, especially such as were introduced into an application after it had been persistently rejected, must be strictly construed against the inventor and in favor of the public, and looked upon as in the nature of disclaimers." These authorities are in point and decisive of the present case.

If an applicant, in order to get his patent, accepts one with a narrower claim than that contained in his original application he is bound by it. If dissatisfied with the decision rejecting his application, he should pursue his remedy by appeal. Under the circumstances of this case, the inventor could not even get a reissue based on the broader claim which she had abandoned. *Leggett v. Avery*, *ubi supra*. Much less can she, in a suit brought to restrain its infringement, enlarge her patent by argument, so as to cover elements not falling within its terms, and which she had explicitly abandoned.

As the skirt protectors sold by the defendants have neither plaited nor fluted bands or borders, we are of opinion, in accordance with the views expressed, that they do not infringe the patent of the plaintiff. *The decree of the Circuit Court must, therefore, be reversed and the cause remanded, with directions to dismiss the bill.*

Notes and citations.

Notes:

3. Patentee is bound by his claim :

Carver v. Hyde, 16 Pet. 513 [4 Am. & Eng. 367.]

LeRoy v. Tatham, 14 How. 156 [5 Am. & Eng. 313.]

Keystone Bridge Co. v. Phoenix Iron Co., 95 U. S. 274
[11 Am. & Eng. 364.]

Schumacher v. Cornell, 96 U. S. 549 [11 Am. & Eng. 443.]

Union Water-Meter Co. v. Desper, 101 U. S. 332 [12 Am.
& Eng. 380.]

Railroad Co. v. Mellon, 104 U. S. 112 [13 Am. & Eng.
200.]

Fay v. Cordesman, 100 U. S. 408 [15 Am. & Eng. 1.]

Thompson v. Boisselier, 114 U. S. 1 [15 Am. & Eng. 549.]

Sargent v. Hall Safe and Lock Co., 114 U. S. 63 [15 Am.
& Eng. 573.]

Western Electric Mnfg. Co. v. Ansonia Brass Co., 114 U.
S. 447 [p. 94 *ante.*]

Yale Lock Mnfg. Co. v. Sargent, 117 U. S. 373 [p. 264
post.]

Sutter v. Robinson, 119 U. S. 530 [p. 481 *post.*]

Snow v. Railroad, 121 U. S. 617.

Crawford v. Heysinger, 123 U. S. 589.

Patent in suit:

No. 155,534. *Macdonald*, H. M. September 29, 1874.
Dress-Protector.

OTHER SUITS ON SAME PATENT :

Macdonald v. Blackmer, 1876. 9 O. G. 746.

Macdonald v. Blackmer, 1878. 4 Ban. & Ard. 78.

Macdonald v. Shepard, 1879. 4 Ban. & Ard. 343.

Macdonald v. Sidenberg, 1879. 4 Ban. & Ard. 586 ; 18 O. G. 193.

Macdonald v. Shepard, 1880. 4 Fed. Rep. 228.

Macdonald v. Shepard, 1882. 10 Fed. Rep. 919.

Notes and citations.

Cited:

IN SUPREME COURT IN :

Sutter *v.* Robinson, 1886. 119 U. S. 531 ; Bk. 30 L. ed. 492.
Crawford *v.* Heysinger, 1887. 123 U. S. 589; Bk. 31 L. ed. 269.
Hendy *v.* The Golden State and Miners' Iron Works, 1888. 127
U. S. 370 ; Bk. 32 L. ed. 207.
Roemer *v.* Peddie, 1889. 132 U. S. 313.

IN CIRCUIT COURTS IN :

Boland *v.* Thompson, February, 1886. 26 Fed. Rep. 633 ; 23
Blatch. 440 ; 35 O. G. 1113.
La Rue *v.* Western Electric Co., July, 1886. 28 Fed. Rep. 85 ; 36
O. G. 453.
Dobson *v.* Lees, April, 1887. 30 Fed. Rep. 625.
Yale Lock Mnfg. Co. *v.* New Haven Sav. Bank, September, 1887.
32 Fed. Rep. 167.
Wirt *v.* Brown, September, 1887. 32 Fed. Rep. 283.
Electrical Accumulator Co. *v.* Julien Electric Co., March, 1889.
38 Fed. Rep. 117.
United States Axle Lubricator Co. *v.* Wurster, April, 1889. 38
Fed. Rep. 426.

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. p. 226.
Walker on Pats. 2d ed., 1889. pp. 146, 270.

Syllabus.

EVERETT B. PRESTON, APPELLANT, v. ALPHEUS
B. MANARD ET AL.*

116 U. S. 661-664. Oct. Term, 1885.

[Bk. 29, L. ed. 763 ; 34 O. G. 1507.]

Submitted January 6, 1886. Decided March 1, 1886.

Particular reissued patent. Want of novelty. Invention.

1. Reissued letters patent, No. 10,047, I. W. McGaffey, February 28, 1882, Fountain Hose Carriage, in which the specification was exactly like that in the original, No. 183,188, October 10, 1876, but with different claims, the only material one of which was in these words: "1. The combined hose-carriage, and fountain-standard, consisting in the combination of the following elements, viz: a wheeled carriage provided with a foot or brace by means of which it may be sustained in an upright vertical position, a nozzle-holding device, and a reel of large diameter to allow the water to flow through the hose when partially wound thereon, substantially as specified," construed and *held*, that the hose-reel, the standard, the brace, the nozzle-holder, and their use in combination being all old, the description of the hose-reel in the specification and claim as "a reel of large diameter to allow the water to pass through the hose when partially wound thereon" is not sufficient to sustain the patent and is a matter of common knowledge, which no one can appropriate to his own use to the exclusion of the public; and that in any view of the case the specification describes nothing that the patentee is entitled to claim, but only what everyone has a right to use without his assistance. (p. 261.)
2. To sustain this patent would be to deprive the public of the right to arrange and use a well-known apparatus in the only way in which its purpose can be beneficially accomplished. (p. 262.)

[Citations in the opinion of the court:]

Guidet v. Brooklyn, 105 U. S. 550 [14 Am. & Eng. 38.] p. 262.

Flood v. Hicks, 2 Biss. 169. p. 262.

*See Explanation of Notes, page III.

Statement of the case.

King v. Wheeler, 2 B. & Ald. 345. p. 262.

Macnamara v. Hulse, Car. & M. 471. p. 262.

Kay v. Marshall, 7 Scott, 548. p. 262.

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The case is stated by the court.

The specifications and drawing of the reissued letters patent referred to in the opinion of the court are as follows :

IVES W. McGAFFEY, OF CHICAGO, ILLINOIS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO E. B. PRESTON, OF SAME PLACE.

FOUNTAIN-HOSE CARRIAGE.

Specification forming part of Reissued Letters Patent, No. 10,047, dated February 28, 1882.

Original No. 183,188, dated October 10, 1876. Application for re-issue filed January 21, 1882.

To all whom it may concern :

Be it known that I, Ives W. McGaffey, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Fountain-Hose Carriages, of which the following is a specification.

In the accompanying drawings, which form a part of this specification, Figure 1 is a front view of the improved combined portable fountain-standard and hose-reel. Fig. 2 is a side elevation of the same. Fig. 3 is a fragmentary sectional view of the reel-spindle, &c.

Like letters of reference made use of in the several figures indicate like parts wherever employed.

In the said drawings, A represents a standard, mounted upon an axle, B, to which are applied the wheels C C and a

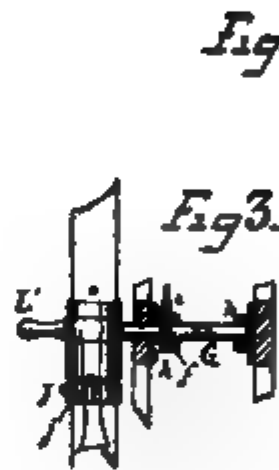
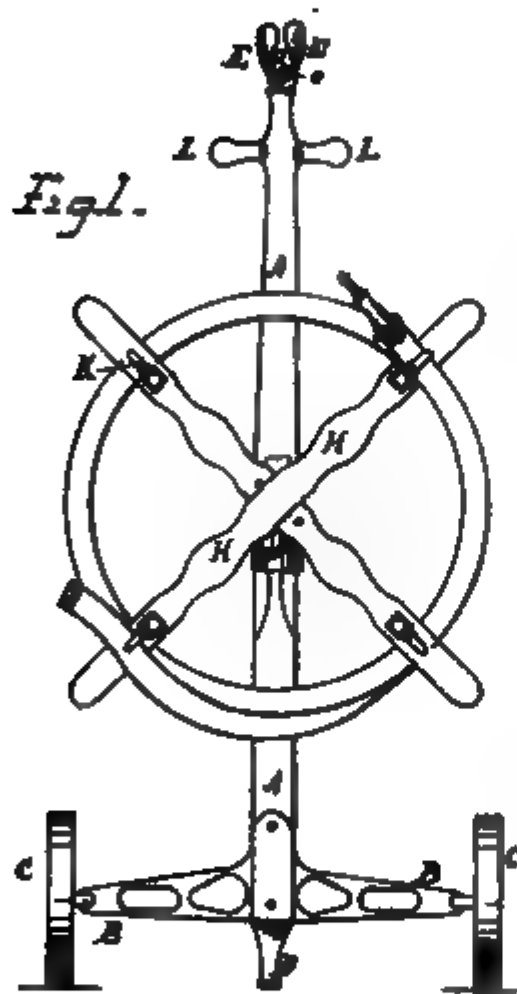
I. W. McGAFFEY,

Assignor, by means assignments, to E. B. PRESTON.

FOUNTAIN HOSE CARRIAGE.

No. 10,047.

Reissued Feb. 28, 1882.



WITNESSES—
A. Everett Brown
J. M. Munday.

INVENTOR—
Ives W. McGaffey
by Munday, Everett & Adcock,
his Attys.

Statement of the case.

foot, D, so contrived, as shown, that when the device rests upon the tripod formed by the wheels and the foot the standard will assume an upright vertical position, to serve as a suitable fountain-standard, and for this purpose the standard A is provided with a nozzle-holding contrivance applied to the upper end thereof, and consisting of a pair of shell-shaped halves, E E, which are secured to the standard by a thumb-screw bolt, *e*, through the flattened overlapping lower ends of the scrolls or shells serving to hold the contrivance in place; also, to afford a hinge upon which the halves may be opened; also, as a pivot upon which the thing as a whole may be set at various angles, and also as a means of locking the shells upon the nozzle to hold it in the required position.

Upon the standard A, at a suitable height from the ground, is a collar, F, fitted to turn loosely upon the standard. To this collar is affixed or made fast therewith the reel-spindle G, upon which is placed the hose-reel H, provided for this purpose with hollow hubs, *h h*. A set-screw, *i*, through one of the hubs enters a groove, *f*, cut around the spindle, and serves to hold the reel from slipping off. It also serves as a means of locking the reel from turning, and also as a means for applying friction as a brake to prevent the reel from turning too freely, when desired, the two latter results being obtained by applying more or less friction, as required.

Below the collar F is a seating, J, upon which the collar rests. This seating is provided with stops *j j* at both sides and in front, so that the reel may be placed in three positions by simply raising the collar free from the stops and turning it—that is to say, it may be borne upon the standard in front, as shown in the drawings, or it may be swung around to either the right or left side.

In picking up or unreeling the hose it will be found convenient to swing the reel around to one side or the other, so that its axis will be parallel to the axis of the ground wheels. This adjustability to three positions on the standard also enables me to poise the nozzle more readily to different

Statement of the case.

points when said nozzle is held by one of the clasps K on the face of the outer reel-arms, instead of by the holder at the top of the standard. The clasps K, it will be noticed, are secured to the face of the outer reel-arms, and they serve not only as a means for holding the nozzle, when desired, but also for holding the butt of the hose when it is all reeled in, or for holding an intermediate part when the butt is connected to the hydrant.

The handles L L, near the top of the standard, are to afford a grasp in wheeling the apparatus about from place to place. Another handle, L', projecting to the rear from the collar, serves as a hold for the other hand in shifting about and adjusting.

In operation the butt of the hose may be attached to the hydrant, and the body of the hose being upon the reel, the standard and reel may be wheeled along to the place desired, paying out hose as it goes. More or less hose may be thus paid out, and the nozzle being poised to its work, it may remain in operation for a time in a fixed position or at rest; or the apparatus may be moved about from place to place and the hose taken up or paid out to suit, while the water is playing as well as when shut off. The reel being supported at a considerable height from the ground renders it possible to employ a reel of a sufficient diameter so that the water will freely flow through the portion of the hose wound thereon.

It will be seen, therefore, that the apparatus may be used as a lawn fountain or sprinkler and moved from place to place without touching the hose with the hands, thus avoiding the dirt and wet; and also that the hose may be taken up or paid out from the standard itself as it is moved about, which is a better way than having the standard at one place and the reel at another, or than having no reel, because the work may be all attended to at the standard, and no more hose left on the ground than is absolutely necessary. With a view to this method of using the apparatus, a peculiar feature of the reel consists in the fact that the hose is wound

Statement of the case.

upon four separate points or bars. This, in connection with the large diameter of the reel, facilitates the discharge of the water. To make this clear it is necessary to understand that each bar is liable to make a dent upon the inner side of the hose. This dent the water passing through will straighten out; but the effort to straighten the dent will cause a tendency of the hose to rise at this point and in the part of the hose between the bars to recurve or bend toward the center of the reel. Now, if a solid drum is employed, or a reel composed of a large number of bars, this rising and recurving tendency is resisted by the intermediate points or bars, and the dent or flattening or compression resists the water and will not straighten out. By sufficiently loosening the set-screw so that it will clear the groove in the spindle, the reel may be taken entirely off from the standard, and the latter in such case may be used as a plain reelless fountain standard.

Having thus fully described by invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combined hose-carriage and fountain-standard, consisting in the combination of the following elements, viz: a wheeled carriage provided with a foot or brace by means of which it may be sustained in an upright vertical position, a nozzle-holding device, and a reel of large diameter to allow the water to flow through the hose when partially wound thereon, substantially as specified.

2. The combination of a hose-reel of large diameter to allow the water to flow through the hose wound thereon with a wheeled carriage for carrying said reel, provided with a foot or brace for sustaining it in an upright position, and devices for holding the nozzle both on the carriage and the reel, substantially as specified.

3. The reel pivoted in two ways to the standard, one pivot being its own axis for reeling and unreeling the hose, and the other pivot at right angles thereto, allowing the reel to swing around the standard, substantially as specified.

4. The combination, with a hose-reel of large diameter to

Argument of counsel.

permit the water to flow through the hose wound thereon and adapted to be fixed in position on its axle, of devices for holding the nozzle on the arms of the reel, substantially as specified.

5. The combination of the reel, the standard, and the sleeve which supports the former upon the latter, together with the stops upon the sleeve for locking it in several positions, substantially as specified.

6. The peculiarly-constructed clasp upon the top of the standard for holding the nozzle, consisting of two shell-like halves secured by a single bolt through the standard, which bolt serves as a pivot upon which the device may be adjusted, as a hinge upon which it may be opened, and as a means of locking it in the desired position when attained, substantially as specified.

7. The wheeled reel-bearing standard, having handles L, L near the top and the handle L' near the middle, substantially as specified.

8. The reel carried upon a spindle having grooves cut around it, in combination with the set-screw through the reel-hub, substantially as specified.

9. The combination, with a fountain-standard provided with wheels, of a hose-reel of large diameter to allow the water to flow through the hose wound thereon, substantially as specified.

IVES W. McGAFFEY.

Witnesses:

H. M. MUNDAY,
EDW. S. EVARTS.

Mr. John W. Munday, for appellants:

It is clear that McGaffey was the first to make a "Fountain hose carriage," a portable device that would serve to hold or poise the nozzle at a suitable height as a fountain standard, and at the same time form a practical fountain or spray, while the unused portion of the hose is wound upon

Argument of counsel.

its reel. He was the first to make the accomplishment of this new and useful result practicable by combining a reel of large diameter with a portable fountain standard. The great utility, importance, and value of this improvement is sufficiently shown by the great and rapid extent to which it has gone into use, and by the fact that it has supplanted all the old devices previously employed. And being the first to combine these elements together and thereby to produce a new and useful result, under the authority of *Bates v. Coe*, 98 U. S. 31 [12 Am. & Eng. 150,] and other like cases, the combination is not anticipated by prior patents or publications which show some one or more of these elements less than the whole.

Messrs. J. F. Farnsworth and C. M. Brazee, for appellees :

If the reissue were warranted at all by law, after such a delay, it is void because the claiming a "reel of *larger diameter*" is no claim at all; it is a mere matter of comparison, and not patentable,—is not the subject of invention; it is merely a question of degree—a matter of construction. He does not state the size.

Guidet v. Brooklyn, 105 U. S. 550 [14 Am. & Eng. 38;] *Smith v. Nichols*, 21 Wall. 112 [9 Am. & Eng. 425;] *Phillips v. Detroit*, 111 U. S. 604 [15 Am. & Eng. 269;] *Slawson v. G. S. R. R. Co.*, 107 U. S. 649 [14 Am. & Eng. 475;] *Morris v. McMillin*, 112 U. S. 244 [15 Am. & Eng. 310;] *Hollister v. B. & B. Mnfg. Co.*, 113 U. S. 59 [15 Am. & Eng. 417;] *Thompson v. Boisselier*, 114 U. S. 1 [15 Am. & Eng. 549.]

The defendants use a drum, not "a reel with four separate points," as specially claimed by complainant in his specifications.

Complainant has expressly disclaimed a reel of large diameter covered with a solid surface or a "solid drum." He disclaims the solid drum and says it does not secure the desired effect.

If it is insisted by the complainant that his claims one,

Opinion of the court.

two, four, and nine are infringed by defendants' solid drum reel, then the complainant's reissue is *void*, because he did not claim this solid drum in the original, but *disclaimed* it in the original specifications, and it is *disclaimed* in the present specifications; and we insist that he is limited to the particular reel described in his specifications; when an inventor is not a pioneer he is restricted to his particular device. *Leggett v. Avery*, 101 U. S. 256 [12 Am. & Eng. 369;] *Sargent v. Hall Safe and Lock Co.*, 114 U. S. 63 [15 Am. & Eng. 573;] *Railway Co. v. Sayles*, 97 U. S. 554 [12 Am. & Eng. 121.]

It is evident that the original patent was only for a "*hose carriage*" which was capable of carrying a reel of *large size*, and nothing more.

We insist that we do not infringe either of the combinations in the four claims sued upon. We have a different carriage, different supports to hold it up, different clasps, have a pawl and ratchet instead of a thumb-screw, and we have a reel with a *drum* instead of a reel with *four bearing points* for hose to rest upon when wound thereon.

Mr. Justice GRAY delivered the opinion of the court:

This was a bill in equity for the infringement of letters patent granted October 10, 1876, and reissued February 22, 1882, for an improved fountain-hose carriage.

The specification of the original patent, after describing the apparatus as consisting of a standard mounted upon an axle, to which are applied two wheels and a foot so contrived that when the device rests upon the tripod formed by the wheels and the foot the standard will assume an upright position to serve as a suitable fountain-standard; and the standard, for this purpose, having at its upper end a nozzle-holding contrivance, and at a suitable height from the ground a collar turning loosely upon it, to which is affixed the spindle of the hose-reel; a set-screw through one of the hubs of the reel, entering a groove in the spindle,

Opinion of the court.

and serving to hold the reel from slipping off, and also, by applying more or less friction, as a means of locking the reel from turning, or as a brake to prevent its turning too freely; on the face of the outer four arms of the reel, clasps which serve as a means not only for holding the nozzle, when desired, but also for holding the butt of the hose when it is all reeled in, or an intermediate part when the butt is connected with the hydrant; two handles near the top of the standard to afford a grasp in wheeling the apparatus about from place to place, and another handle projecting to the rear from the collar, to serve as a hold for the hand in shifting about and adjusting; proceeded as follows:

“In operation, the butt of the hose may be attached to the hydrant, and the body of the hose being upon the reel, the standard and reel may be wheeled along to the place desired, paying out hose as it goes. More or less hose may be thus paid out and, the nozzle being poised to its work, it may remain in operation for a time in a fixed position or at rest; or the apparatus may be moved about from place to place and the hose taken up or paid out to suit, while the water is playing as well as when shut off. The reel being supported at a considerable height from the ground renders it possible to employ a reel of a sufficient diameter so that the water will freely flow through the portion of the hose wound thereon. It will be seen, therefore, that the apparatus may be used as a lawn fountain or sprinkler, and moved from place to place without touching the hose with the hands, thus avoiding the dirt and wet; and also that the hose may be taken up or paid out from the standard itself as it is moved about, which is a better way than having the standard at one place and the reel at another, or than having no reel, because the work may be all attended to at the standard, and no more hose left on the ground than is absolutely necessary. With a view to this method of using the apparatus, a peculiar feature of the reel consists in the fact that the hose is wound upon four separate

Opinion of the court.

points or bars. This, in connection with the large diameter of the reel, facilitates the discharge of the water. To make this clear it is necessary to understand that each bar is liable to make a dent upon the inner side of the hose. This dent the water passing through will straighten out; but the effort to straighten the dent will cause a tendency of the hose to rise at this point, and in the part of the hose between the bars to recurve or bend toward the center of the reel. Now, if a solid drum is employed, or a reel composed of a large number of bars, this rising and recurving tendency is resisted by the intermediate points or bars; and the dent or flattening or compression resists the water and will not straighten out. By sufficiently loosening the set-screw, so that it will clear the groove in the spindle, the reel may be taken entirely off from the standard, and the latter in such case may be used as a plain, reelless fountain-standard."

The first claim in the original patent was as follows:

"1. The hose-reel, mounted upon a wheeled carriage, which is provided with a foot or brace by means of which it may be sustained in an upright vertical position, whereby the device becomes capable of use both as a hose-carriage and as a fountain-standard, substantially as specified."

A former suit brought March 29, 1880, by the plaintiff against the defendants, under the original patent, was heard upon pleadings and proofs, and dismissed by the court on January 6, 1882, for want of novelty. On January 21, 1882, the plaintiff applied to the Patent Office for a reissue, which was granted on February 22, 1882, with a specification exactly like that in the original patent, but with different claims, the first and only material one of which was in these words:

"1. The combined hose-carriage and fountain-standard, consisting in the combination of the following elements, viz: A wheeled carriage, provided with a foot or brace by means of which it may be sustained in an upright vertical position,

Opinion of the court.

a nozzle-holding device and a reel of large diameter, to allow the water to flow through the hose when partially wound thereon, substantially as specified."

The present bill was filed April 13, 1882. By the evidence taken in the cause, it appeared that a fountain-standard and hose-reel, mounted upon a wheeled carriage, provided with a foot or brace to sustain it in an upright position, and with a nozzle-holder, were known and used in combination with each other before the plaintiff's alleged invention. This bill also was dismissed, and the plaintiff appealed to this court.

(a) It is unnecessary to consider the difference between the claim in the reissue and the claim in the original patent, because, assuming the reissue not to be invalidated thereby, yet it sets forth no patentable invention.

The hose-reel, the standard, the brace, the nozzle-holder, and their use in combination being all old, the description of the hose-reel, in the specification and claim, as "a reel of large diameter, to allow the water to pass through the hose when partially wound thereon," is not sufficient to sustain the patent.

The requisite diameter of the reel and its proportion to the size of the hose are not defined in the specification, but are left to be ascertained by experiment or from general knowledge. If the patentee had discovered anything new in the size or proportions of the reel, requisite to allow the water to flow through the hose, he should have described it with such precision as to enable others to construct the apparatus. The fact that water will flow through a hose wound on a reel, if the diameter of the reel is large enough and the curves or angles are not too abrupt, is a matter of common knowledge which no one can appropriate to his own use, to the exclusion of the public. In any view of the case, the specification describes nothing that the patentee is

116 U. S. 663-664.

(a) 116 U. S. inserts "After stating the facts as above reported he continued," and begins opinion here.

Notes and citations.

entitled to claim ; but only what every one has a right to use without his assistance. *Guidet v. Brooklyn*, 105 U. S. 550 [14 Am. & Eng. 38 ;] *Flood v. Hicks*, 2 Bissell, 169 ; S. C. 4 Fisher, Pat. Cas. 156 ; *The King v. Wheeler*, 2 B. & Ald. 345, 354 ; *Macnamara v. Hulse*, Car. & M. 471, 477 ; *Kay v. Marshall*, 7 Scott, 548 ; S. C. 5 Bing. N. C. 492 ; 1 Beavan, 535 ; 8 Cl. & Fin. 245 ; *West*, H. L. 682 ; 2 Webster Pat. Cas. 34, 68, 75, 77, 82, 84.

To sustain this patent would be to deprive the public of the right to arrange and use a well known apparatus in the only way in which its purpose can be beneficially accomplished.

Decree affirmed.

116 U. S. 664.

Patent in suit :

No. 183,188. McGaffey, I. W. October 10, 1876. Reissue No. 10,047. February 28, 1882. Fountain-Hose Carriage.

Cited :

IN CIRCUIT COURTS IN :

Jones v. Clow, July, 1889. 39 Fed. Rep. 785.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. p. 304.

Walker on Pats., 2d ed., 1889. p. 29.

1

Syllabus.

YALE LOCK MANUFACTURING COMPANY, APPELLANT, v. JAMES SARGENT.*

117 U. S. 373-378. Oct. Term, 1885.

[Bk 29, L. ed. 950 ; 35 O. G. 385.]

Reversing Sargent v. Yale Lock Co., 17 Blatch. 249.

Argued March 15, 16, 1886. Decided March 29, 1886.

Particular patent construed and not infringed.

1. Claim 1 of letters patent, No. 98,622, J. Sargent, January 4, 1870, Permutation Lock, for "The arrangement of two or more rollers, H, H', of varying eccentricity, when combined with the cam in the manner and for the purpose specified," construed and *held*, that a variation of eccentricity is made by the description and claim as essential to the invention, although an equally good or even the same result might be obtained without it ; and is not infringed in view of the fact that the defendant does not use the same combination, and employs no device as an equivalent and substitute for the omitted element. (p. 271.)

[Citations in the opinion of the court :]

Water-Meter Co. v. Desper, 101 U. S. 332 [12 Am. & Eng. 380.] p. 272.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.] p. 272.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The case is stated by the court.

Mr. Frederick H. Betts, for appellant :

The Sargent claim is for an improvement which consists in the combination with the cam of "two or more rollers, H H', of *varying eccentricity*. It is this particular improvement and no other which is claimed. The defendant's lock *does not* have, combined with its cam, two or more rollers of *varying eccentricity*.

*See Explanation of Notes, page III.

Argument of counsel.

It is proved beyond dispute, that if there be any variation of eccentricity it is an unintentional variation. The two rollers of the defendant's lock are made by the same tool and at the same time, and with every effort to make them absolutely identical.

The complainant's patent, when it claims a lock of "varying eccentricity," means that the eccentricity of those rollers should be *intentionally* varied, and also so varied, *at least* to such an extent as to be discernible. No one following the specification would attempt to make the rollers alike. The direction of the specification is to make them unlike. A person who follows the specification would *not* do what the defendants have done.

The defendants cannot be held as infringers when they have intentionally done and have succeeded, to the best of any person's ability, in doing that which the patent in effect says should *not* be done.

It is not sufficient that the same result should be accomplished by the defendant's machine as by the complainant's. To constitute infringement, identity of result is not sufficient. The same result must be accomplished by the same means, or substantially the same means.

Case *v. Brown*, 2 Wall. 320 [7 Am. & Eng. 360;] *Carver v. Hyde*, 16 Pet. 515 [4 Am. & Eng. 367;] *Fay v. Cordesman*, 109 U. S. 408 [15 Am. & Eng. 1;] *Sargent v. Hall Safe & Lock Co.*, 114 U. S. 63 [15 Am. & Eng. 573.]

Messrs. Geo. Ticknor Curtis and Edmund Wetmore,
for appellee:

It appears from the proofs, and is not denied by the defendant, that the infringing lock has two disconcerting rollers, in combination with a cam, on which they ride. The one feature which enters specifically into the claim of the patent in suit, and which is said not to be found in the defendant's lock, is the "varying eccentricity" of the disconcerting rollers.

Nothing can be plainer than the fact that the action of

Opinion of the court.

the disconcerting rollers, described by the witness Towne, is identical with that proposed in the patent.

The sole purpose of giving a different eccentricity to the rollers is to secure the alternation in action, by breaking the continuity of rotation, movement, and contact. It is impossible to deny that the defendant's lock accomplishes this result by the same means, operating in the same manner.

Mr. Justice MATTHEWS delivered the opinion of the court:

The bill in this case was filed by the appellee for an injunction to restrain the defendant below, the appellant, from an alleged infringement of letters patent, No. 98,622, dated January 4, 1870, granted to James Sargent, for an improvement in permutation locks; and for an account, etc. On final hearing on bill, answer, replication, and proofs, there was a final decree for the complainant for an injunction and for \$400.75 damages and costs. The defendant has appealed.

The question involved is the fact of infringement, and that in its turn depends upon the proper construction of the complainant's patent.

The specifications and claim of the patent, with the accompanying drawings are as follows:

"Figure 1 is an elevation of the lock, with the back plate removed to show the interior.

Fig. 2, a vertical cross-section of the same.

Fig. 3, a diagram, showing the cam and the disconcerting eccentrics in perspective.

Like letters of reference indicate corresponding parts in all the figures.

Nature of the Invention.

This lock is an improvement upon that of Linus Yale, in which an eccentric roller is combined with the cam for disconcerting the action upon tumblers.

The invention consists in combining with the cam an arrangement of two or more eccentric rollers, of varying ec-

Opinion of the court.

centricity, turning upon the same bearing, so that in revolving one or both may turn and alternate in action, thereby greatly increasing the difficulty of mapping out or locating the position of either.

General Description.

In the drawings—

A represents the case of the lock ;

B, the cylinder for holding the tumblers or wheels ;

C, the spindle ;

D, the cam ;

E, the dog, which falls to release the bolt ; and,

G, the bolt.

These are the ordinary parts employed in combination locks, and may be arranged in any desired manner ; hence, they need no special description here.

A single eccentric roller, H, pivoted, at *a*, to a suitable arm or bearing, and resting upon the cam D, has been before employed, as already stated.

Its object is to disconcert the action inside the lock, so that an expert lock-pick or burglar cannot tell the position of the tumblers when operating upon the lock.

It has been found by experiment, however, that such a device is not proof against the skill of an expert lock-pick, for, by the use of a delicate instrument attached to the spindle outside, and by careful manipulation, the shape and position of this roller can be actually mapped out or ascertained and the lock opened.

To obviate this difficulty as far as possible, I combine with this roller one or more rollers H', pivoted to the same arm or bearing, and resting upon the periphery of the cam in the same manner ; but all these rollers are made of varying eccentricity, and of different shape, and, therefore, when the cam is turned, the several rollers strike at different positions, and when one touches the other may be removed from contact, thus alternating in action. They may also turn in different directions.

Opinion of the court.

By this means, owing to the different contact of the several rollers, the difficulty of mapping out and locating the same is very greatly increased.

In transferring the action from one roller to the next, the loss of contact with the first disarranges the position, and thus renders it indefinite.

In this manner, and for this reason, the addition of another roller to the one already in use does not produce an accumulation of the same effect in action, but produces a different action altogether, by breaking the continuity of rotation and movement and contact.

I disclaim the employment of a single eccentric; but what I claim as my invention, and desire to secure by letters patent, is—

The arrangement of two or more rollers, H, H', of varying eccentricity, when combined with the cam, in the manner and for the purpose specified."

Mr. Henry B. Renwick, an expert called by the complainant, in explanation of the patent, says:

"I have examined the patent, and believe that the words 'varying eccentricity,' as applied to the rollers, mean that the rollers shall have their axes at different points in their diameters. If the two rollers be each $\frac{3}{4}$ of an inch in diameter, and one have its axis $\frac{3}{10}$ of an inch from the nearest point in its periphery, and the other have its axis $\frac{4}{10}$ of an inch from the nearest point of its periphery, then they will be of varying eccentricity. This variation of distance of the axis from the nearest point of the periphery need be no greater than the smallest distance that can be measured by the sensitive micrometers used in lock-picking, for the reason that the whole aim of the patented contrivance is to avoid picking by means of a micrometer."

The same witness was also examined upon the question of infringement, upon a comparison with the patent, of a lock made by the defendant, marked as an Exhibit Cole No. 1. He said:

J. Sargent,
Permutation Lock.

No. 98522.

Patented Jan. 4. 1870.

FIG. I.

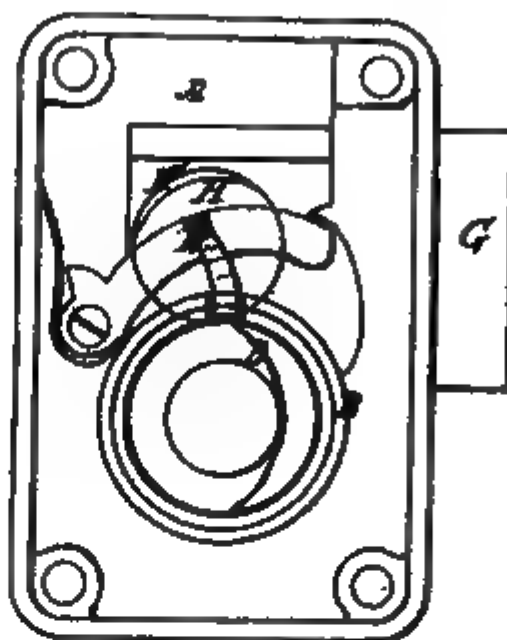


FIG. II.

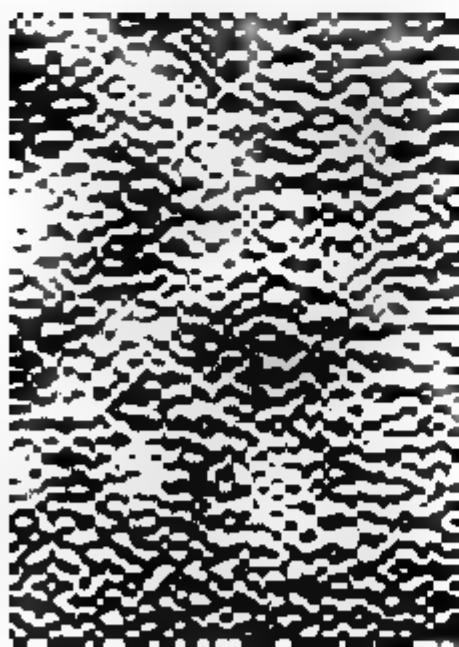
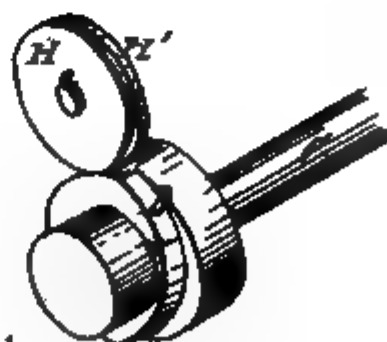


FIG. III.



Witnesses:
John G. Richardson
D. R. Cowt.

Inventor.
Josias Sargent

Opinion of the court.

"I have examined the lock Cole No. 1. It has two disconcerting rollers in combination with a cam upon which they ride. These rollers being for the purpose of preventing a lock-picker from ascertaining the position of the rotary tumblers by means of a micrometer, in this respect it is substantially identical with the contrivance described in the patent. Whether these rollers in the exhibit are of varying eccentricity or not I cannot positively determine, although they appear to be so by examination of them without instruments. A variation of eccentricity between the two rollers, which could be measured by a micrometer only, would be sufficient to secure the object which these rollers are designed to effect, and they may have such eccentricity, and yet it may be possible to determine it by the eye alone."

On cross examination he admitted that he could not tell with certainty whether the rollers were or were not of varying eccentricity. No other witness on the part of the complainant is able to prove the fact of a variation of eccentricity between the rollers used by the defendant; while on the other hand the testimony on the part of the defendant does not permit us to doubt that the rollers used in its locks are identical in their eccentricity and shape.

If, therefore, a variation of eccentricity in the rollers is a material feature of the invention, or is made material by the description and claim of the patent, no infringement has been proved.

It does not meet and answer the difficulty to say, as has been suggested in argument, that although the rollers in the defendant's locks may be of the same eccentricity and shape as respects each other, yet that when in revolution they vary in eccentricity in reference to the cam which operates them, so that in action their eccentricity varies, and the same result is produced. Because the description in the patent and claim require that the variation of eccentricity should be between the rollers themselves, and not a variation in action in reference to the cam, and unless the same result is pro-

Opinion of the court.

duced by the same means, there is no infringement of the invention. Besides, the fact is not as claimed. It is impossible mechanically for the rollers, being identical in eccentricity and shape with each other, to have the same relation at all times to the cam as though they varied in eccentricity. For, as is pointed out in the evidence on the part of the defendant, when the rollers are the same in eccentricity and shape with each other, there must be intervals of time at which "the two rollers having been rotated to a point at which their peripheries exactly coincided, both would revolve together for a short period, until some slight impediment or change in the periphery of the cam would cause one to bear more directly than the other upon the periphery of the cam, when this one would revolve with the cam, the other remaining stationary; and so on." And this feature in the action of two rollers, identical in eccentricity, it is said, introduces an additional irregularity into the operation of the mechanism, which increases its disconcerting power and adds to the difficulty of calculating the movement which enables the expert to pick the lock. So that the mode of operation is different, accordingly as the rollers are of the same or varying eccentricities.

Were it otherwise, however, it would still be necessary to regard the feature of a variation of eccentricity as essential to the invention, because made so by the description and claim of the patent, although an equally good or even the same result might be obtained without it. The defendant does not use the same combination, and employs no device as an equivalent and substitute for the omitted element. It is not, therefore, liable as an infringer. *Water-Meter Co. v. Desper*, 101 U. S. 332 [12 Am. & Eng. 380;] *Gage v. Herring*, 107 U. S. 640 [14 Am. & Eng. 454.]

The decree of the Circuit Court is accordingly reversed and the cause is remanded, with directions to dismiss the bill.

Notes and citations.

Patent in suit:

No. 98,622. Sargent J. January 4, 1870. Permutation
Lock.

Cited:

IN SUPREME COURT IN :

Fornicrook v. Root, 1888. 127 U. S. 176 ; Bk. 32 L. ed. 97.
Hendy v. Golden State & Miners' Iron Works, 1888. 127 U. S.
370 ; Bk. 32 L. ed. 207.

IN CIRCUIT COURTS IN :

Everest v. Buffalo Lubricating Oil Co., July, 1887. 31 Fed. Rep.
742.

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. pp. 237, 242.
Walker on Pats., 2d ed. 1889. pp. 264, 270.

Syllabus.

YALE LOCK MANUFACTURING COMPANY, APPELLANT, v. JAMES SARGENT.*

117 U. S. 536-554. Oct. Term, 1885.

[Bk. 29, L. ed. 954 ; 35 O. G. 497.]

Modifying Sargent v. Yale Lock Mnfg. Co., 17 Blatch. 244 and 249.

Argued March 12, 15, 1886. Decided April 5, 1886.

Particular reissue patent infringed. Co-partner. Measure of damages in absence of license-fee, &c. Delay in filing disclaimer. Costs.

1. Claim 1 of letters patent, No. 57,574, J. Sargent, August 28, 1866, Lock, was for "The rotating tumbler, I, when separated and isolated in action from the permutation wheels, and so arranged that any inward pressure upon the bolt will be exerted on the bearing of said tumbler, and have no action or effect upon the said permutation wheels, 'substantially,' " &c ; *held*, that claim 1 of its, reissue, No. 4,696, January 2, 1872, for "In a combination lock in safe or vault doors, a bolt, I, which turns on a pivot or bearing, when said bolt, I, is used in a lock having no ordinary sliding lock bolt, and in connection with the separate bolt work of the door, and so arranged as to receive the pressure of the said bolt without transmitting it to the wheels or other equivalent works of the lock," was for the same invention, a substantial reproduction of the original claim, and not an unlawful expansion, and therefore not affected by the delay in reissuing. The 4th claim invalid for unlawful expansion after 5 years delay. (p. 286.)
2. The reissue claim *held*, novel and infringed by a lock which had the pivoted bolt of the first claim of the patent, and although the bolt of the infringing lock served as a stop to two sets of bolt-works instead of one, as in the patent, and was pivoted differently and connected differently from that in the patent, yet, that such changes in construction and arrangement came fairly within the terms of said claim, and the operation of the

* See Explanation of Notes, page III.

Argument of counsel.

two locks were the same in respect to the combination of said claim. (p. 290.)

3. The plaintiff, as owner of the patent, is entitled to recover the damages in this case. He may be accountable to his co-partner for a part of them, but the co-partner could not sue on the patent, for such damages, or any part of them. (p. 297.)
4. Where patentee granted no licenses, had no established royalty, but manufactured his own locks in sufficient numbers to supply the demand, a reduction in the price of his own locks, forced by the competition of the defendant, is a fair measure of damages. (p. 297.)
5. No disclaimer can be filed after the expiration of a patent. (p. 299.)
6. Where the validity of a reissue claim had been sanctioned by the Commissioner of Patents in granting it, and the claim was not held invalid by the circuit court, *held*, that there was no unreasonable delay in filing a disclaimer to it. (p. 299.)
7. One of the claims of the reissue being invalid, the complainant cannot recover costs in the court below, and in this court each party pays his own costs, and the expense of printing the record is shared equally. (p. 300.)

[Citations in the opinion of the court:]

McComb v. Brodie, 1 Woods, 153. p. 298.

Philp v. Nock, 17 Wall. 460 [9 Am. & Eng. 84.] p. 298.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.] p. 299.

Silsby v. Foote, 20 How. 378 [6 Am. & Eng. 388.] p. 300.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The case is stated by the court.

Mr. Frederick H. Betts, for appellant:

If we are correct in the construction that the original first claim required that the turning bolt should be mounted alone on its own shaft, and that this requirement was eliminated by the reissue, after six years delay, then the first claim of the reissue is in that respect expanded, and therefore void; but if the court should hold that in this respect there is no difference between the original and reissue, then

Argument of counsel.

we contend that the first claim of the reissue is void for want of patentable novelty.

In view of the admissions and amendments made in the correspondence contained in the file wrapper, and the erasure and modification of the first claim of the original patent that Sargent admitted himself to be the inventor of nothing new except the *omission* from a lock, containing permutation wheels, or equivalent mechanism, and an insulated turning bolt, of "the ordinary sliding bolt."

There is absolutely no patentability in this.

The omission of the ordinary sliding bolt was a mere matter of cheapening; was the work of a mechanic, and not of an inventor, and the patent read in the light of its own history, which must be construed strictly against the inventor and in favor of the public, is void for lack of patentable novelty. Sargent v. Hall Safe & Lock Co., 114 U. S. 63 [15 Am. & Eng. 573;] Thompson v. Boisselier, 114 U. S. 1 [15 Am. & Eng. 549.]

The first claim of the reissue is also void for want of patentable novelty when compared with the particular prior locks introduced in evidence by the defendants.

Sargent has simply taken the mechanism of the Butterworth padlock and applied it in an ordinary lock case, in an ordinary way, to perform its usual office of "dogging" a door bolt.

It cannot require any invention to provide Butterworth's mechanism with a case that could be screwed to a door, or to lengthen the spindle and arrange the dial so that it would be outside a door, instead of outside the padlock case, nor to locate the revolving bolt so that it would "dog" the bolt-work of a door, instead of engaging a hasp.

The case falls directly within the principle that "The application of an old process or machine to a similar or analogous subject, with no change in the manner of application and no result substantially distinct in its nature, will not sustain a patent, even if the new form of result has not been before contemplated." Locomotive Co. v. Penn. R. R. Co.,

Argument of counsel.

110 U. S. 490 [15 Am. & Eng. 148;] *Smith v. Nichols*, 21 Wall. 112 [9 Am. & Eng. 425;] *Phillips v. Detroit*, 111 U. S. 604 [15 Am. & Eng. 269;] *Stephenson v. Brooklyn R. R. Co.*, 114 U. S. 149 [p. 63 *ante*.]

It is clear, that upon the only construction of the patent under which it can have any validity, that the defendants did not infringe.

If complainant can recover damages at all for infringement of his patent, it must be upon proof that the adoption of its valuable features has diminished the profits that he would otherwise have received *from the same valuable features* in his own locks.

Under a decree under the first claim only, the complainant cannot recover damages for lowering the price of locks whose principal value lay in the fourth claim—certainly unless he introduce some evidence tending to show what proportion of value is due to the several claims. *Westcott v. Rude*, 19 Fed. Rep. 830; *Wooster v. Simonson*, 16 Fed. Rep. 680; *Proctor v. Brill*, 4 Fed. Rep. 415.

Even if the first claim were valid, as the court decreed, it should not have entered a decree without requiring a disclaimer of the unlawful claims, certainly not one with costs.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.]

They should have refused any decree because no disclaimer had been entered to the unlawful claim and the decree which was, in fact, passed, is erroneous.

Messrs. George Ticknor Curtis and Edmund Wetmore, for appellee:

The first point in the assignment of errors fails, as it must, for the reason that the reissued patent in suit was not unlawfully or unduly expanded.

As to whether the changes, necessary to convert the Butterworth padlock into the lock of the reissue, amounted to a novel and patentable invention, it would seem, to one familiar with the practical operation of each, that there

Argument of counsel.

could be no difficulty in clearly perceiving the obvious differences upon which the patentable novelty of the Sargent lock is securely founded. In the light of an accomplished fact, however, it is not always easy to distinguish fully between the products of mechanical skill and the slow steps by which invention has advanced to the greatest perfection of an art.

It is always a fair inquiry, why, if this invention was so obvious, requiring only the smallest mechanical skill to evolve it from known structures, why was it not made before? Here is a change which, when made, supplied a general want, as is fully evidenced by the rapidity with which the invention went into extensive use. No invention obtains a firm foothold in the market, displacing and superseding its predecessors in the same line, unless it possesses a superiority commensurate with the extent of its adoption; and in such a case the general preference for the new mechanism is a fact upon which patentable novelty may safely be predicated.

The defendant's lock exhibits a turning bolt used in a lock having no sliding lock bolt, in connection with the separate bolt-work of the door, and so arranged as to receive the pressure of said bolt-work without transmitting it to the wheels of the lock. The organization of parts is the same, their functions are identical. The mechanism intervening between the lock-bolt and the wheels is the full equivalent of that shown in the patent, and the sole feature of difference, the change in location of the bearing of the turning bolt, is wholly inconsequential as regards the combination covered by the claim, the separate function of the parts, or the final result produced: "Change of location of one element of a combination without any new function does not evade a patent." *Adams v. Joliet Mnfg. Co.*, 12 O. G. 93; *Dane v. Illinois Mnfg. Co.*, 3 Biss. 74.

The proposition that "reduction of prices and consequent loss of profits, enforced by infringing competition, is a proper ground for awarding damages" is undoubted law.

Opinion of the court.

Carter v. Baker, 4 Fish. 404; Smith v. O'Connor, 6 Fish. 469; McComb v. Brodie, 5 Fish. 384; Pitts v. Hall, 2 Blatch. 229; Lane v. Peck, 13 Fed. Rep. 475; Fitch v. Bragg, 16 Fed. Rep. 243.

The defendant cannot apportion his own wrong, and it is submitted that the burden of proof lies upon him to show that the loss to the plaintiff, which is directly accounted for by the infringement, was the result of other causes and would necessarily have occurred even if the infringement had not taken place.

The exception that the plaintiff cannot recover because his partner is not made a part is untenable. "The plaintiff, as the owner of the patent, is entitled to recover damages in this case. He may be accountable to his co-partner for a part of them, but the co-partner could not sue on the patent for such damages, or any part of them."

Gordon v. Anthony, 16 Blatch. 234; Curtis on Pats. § 402.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity, brought in the Circuit Court of the United States for the Southern District of New York, by James Sargent against the Yale Lock Manufacturing Company, to recover for the infringement of reissued letters patent, No. 4,696, granted to Sargent, January 2d, 1872, for an "improvement in locks," on an application therefor filed September 25th, 1871 (the original patent, No. 57,574, having been granted to him August 28th, 1866.)

The specification and drawings of the reissue are as follows:

"My invention consists in combining with the ordinary combination-wheels and the other working parts of a combination lock which has no sliding lock-bolt, a bolt turning on a pivot or bearing, which is so isolated or removed from contact with the said wheels as to receive any pressure or

(93.)

JAMES SARGENT.

Improvement in Permutation Locks.

No. 4,696.

Reissued Jan. 2, 1872.

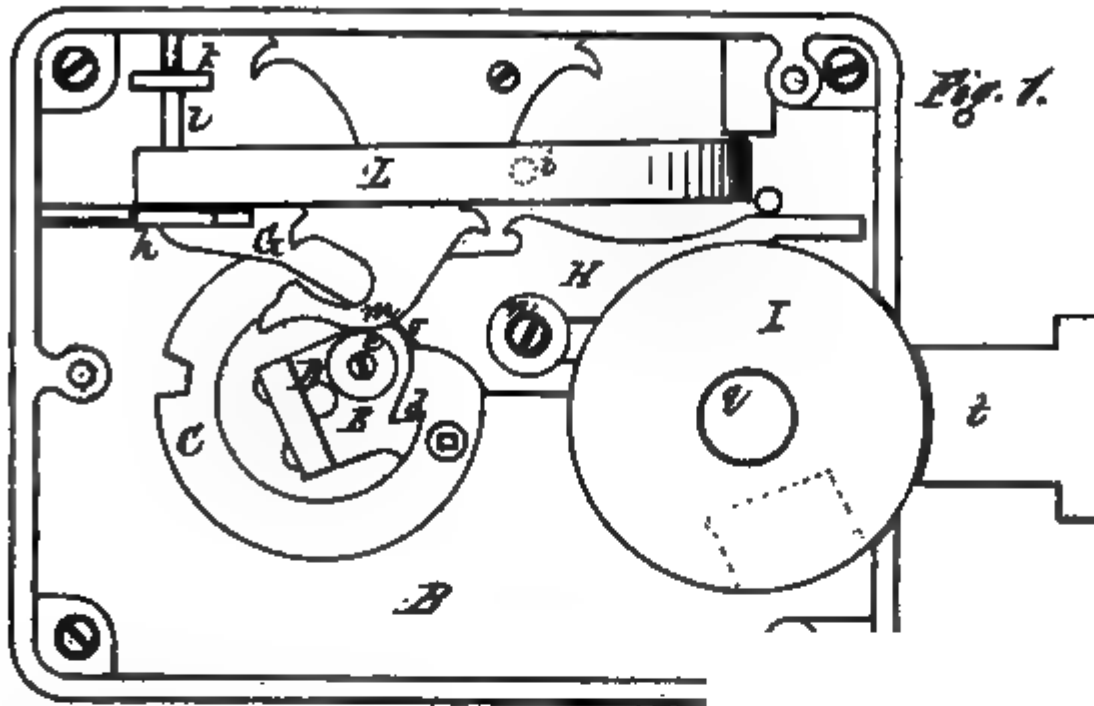


Fig. 1.

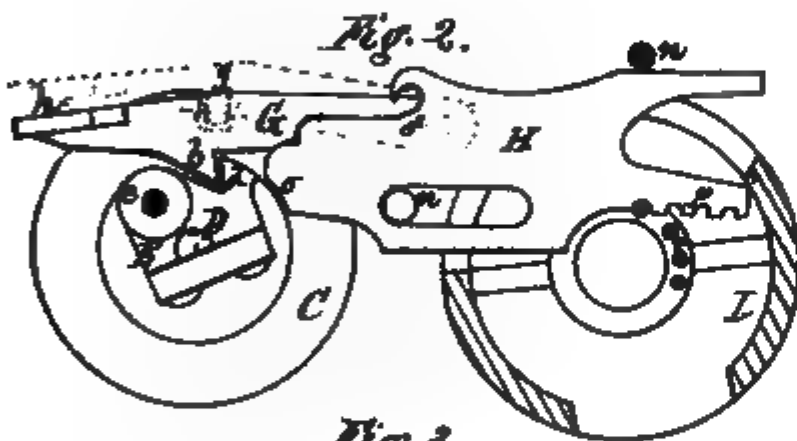


Fig. 2.

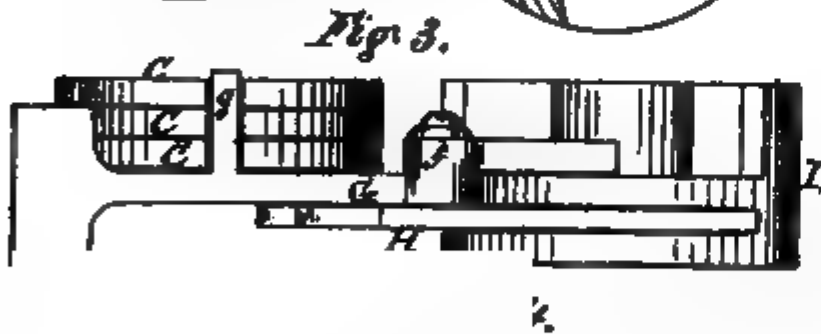


Fig. 3.

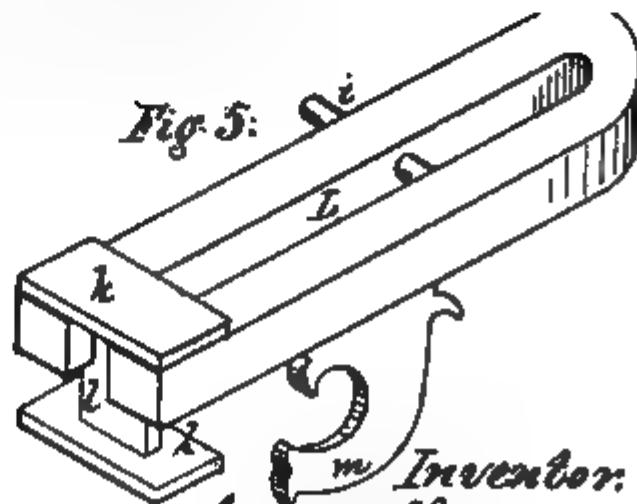


Fig. 5.

James L. Norris.
Patent & Sweet, for.

Inventor:
James Sargent
per Burke, Rogers & Good
attys
Rochester, N.Y.

Opinion of the court.

strain which may be applied through the separate bolt-work of the safe or vault door, and cut off the communication between the bolt-work of the door and the wheels or fence lever of the lock, whereby the position of the slots in the wheels can be determined and the lock 'picked,' as can be done in most cases where the ordinary sliding-bolt is used without some mechanical device to prevent.

In the drawings, Figure 1 is an elevation of my improved lock, with the back plate removed; Figs. 2 and 3 an elevation and top view, respectively, of the pivoted bolt, the combination-wheels, the cam, and the lever work that connects them; Fig. 4, a perspective view of the pivoted bolt; Fig. 5, a similar view of the magnet and armatures; Fig. 6, a view showing the manner of applying the spindle and cam to a safe or vault door.

A, represents the plate of a safe door, and B, the case of the lock which is applied thereto. C, C, C, are the combination-wheels, and D, the operating spindle. The spindle passes through a hollow stud, *a*, of the case, and has screwed upon its inner end the cam E, as shown most clearly in Fig. 6. The wheels themselves rest on the stud *a*. I is the bolt, turning on a pivot or bearing, *q*. Its location is such as to rest closely in the rear of the stem, *t*, of the heavy bolt-work of the door, and to hold it out when in one position, but to allow it to retract, to free the bolt-work, when in the other position, said bolt I, turning on its pivot or bearing to allow this to be done. H is a sliding-bar, which gives motion to the bolt as it is thrown forward or backward, being connected together by cog-teeth *p r*. The bar slides on studs, *n n*, by which it keeps its horizontal position. G is a lever pivoted at *f*, to bar H, and serving to throw the latter back. It has a hook, *b*, Fig. 2, which engages with the bit, *d*, of the cam, to draw the bar back. The forward motion is given by the cam striking the end *o*, of the bar H. L is a magnet of the form shown in Fig. 5, which is suspended on a pivot, *i*. Its open end rests between armatures

Opinion of the court.

h k, which are separated by a brass pendant *l*. The armature *h* is attached to the end of lever *G*. When the magnet is in contact with the lower armature *h*, the dog *g* will be held away from the wheels; but when raised and brought in contact with the upper armature *k*, the lever is released and the dog is then allowed to fall into the notches of the wheels, to release the bolt. The magnet is raised by a roller, *c*, of the cam, which strikes a bearing, *m*, of the magnet.

In general principle the magnet is the same as that covered by the patent of Sargent and Covert, May 2, 1865; but the construction and arrangement of the magnet and armatures are much simpler and more effective and constitute one feature of my present invention.

An important feature in my invention is the employment of the bolt *I*, turning on a pivot or bearing, instead of the sliding bolt heretofore in use. It is isolated, so to speak, from the combination wheels and the other main working parts of the lock; and, therefore, any strain which is brought to bear upon it by the heavy bolt-work will be expended on the bolt itself and not upon the wheels. In the old form of lock the sliding-bolt extends back so as to connect with or come near to the wheels, and any strain thereon is liable to disarrange the lock-works.

Another important advantage of the isolation of the bolt is that it increases the difficulty of 'picking,' by being removed from all contact with the wheels. A common mode of picking ordinary locks is to force the bolt back, so as to get a contact with it and the edges of the wheels, by which their position is ascertained. In my lock this cannot occur, as the bolt simply turns on its bearing or pivot, and no back action can bring it or the lever-work against the wheels.

The bolt may not only be of the circular form shown in the drawings, but of a segmental form, which will serve the same purpose.

I am aware that the combination-wheels themselves have been made with notches, and so arranged that the ordinary

Opinion of the court.

sliding-bolt which rests against their edges may fall back and within the notches, when they are all set. Such is not the equivalent of my invention, as my express purpose is to avoid all contact of the bolt with the edges of the wheels."

The claims of the reissue, five in number, are as follows, but only claim 1 is alleged to have been infringed:

"1. In a combination-lock for safe or vault doors, a bolt, I, which turns on a pivot or bearing, when said bolt, I, is used in a lock having no ordinary sliding lock-bolt, and in connection with the separate bolt-work of the door, and so arranged as to receive the pressure of the said bolt-work without transmitting it to the wheels or other equivalent works of the lock.

2. In a combination lock for safe and vault doors, I claim the combination of the bolt I, bar H, and cog-connection *p r*, when said bolt, I, turns on a pivot or bearing, and receives the pressure of the bolt-work situated outside the lock works, and intervenes between the bolt-work and the wheels.

3. I claim, in combination with the bolt I, the bar H, and lever G, arranged and operating as herein set forth.

4. I claim, in combination with the vibrating magnet L, the armatures *h k* and pendant *l*, arranged as herein described.

5. I claim the combination and arrangement of the wheels C C, cam E, lever G, bar H, and bolt I, as herein described."

The defences set up were want of novelty, non-infringement, and invalidity of the reissue. After a hearing on pleadings and proofs, an interlocutory decree was entered finding the reissued patent to be valid and to have been infringed, and awarding a perpetual injunction and an account of profits and damages. The master reported \$7,771 damages in favor of the plaintiff. The defendant excepted to the report, but the exceptions were overruled by the court, and a final decree was entered for the plaintiff, for \$7,771 damages and \$650.17 costs. The defendant has appealed to this court.

Opinion of the court.

It is contended that the first claim of the reissue is void for unlawful expansion, after unreasonable delay in applying for the reissue.

The original patent had three claims, as follows:

"1. The rotating-tumbler I, when separated and isolated in action from the permutation-wheels, and so arranged that any inward pressure upon the bolt will be exerted on the bearing of said tumbler, and have no action or effect upon the said permutation-wheels, substantially as and for the purpose herein specified.

2. In combination with the turning-tumbler I, the cog-bar H, and lever G, arranged and operating as herein set forth.

3. The combination and arrangement of the combination-wheels C, cam-disk E, pivoted lever G, cog-bar H, and turning-tumbler I, the whole operating as herein specified."

Claim 3 of the reissue is substantially the same as claim 2 of the original, and claim 5 of the reissue is substantially the same as claim 3 of the original, while claims 2 and 4 of the reissue are new claims.

The defendant directs attention to these facts: When Sargent applied originally for his patent, on February 6th, 1866, he asked for claim 1 in this form: "The turning-bolt I, resting on its bearing *q*, in combination with the mechanism of a combination lock, in such manner as to practically isolate or disconnect it from the main operating parts, substantially as set forth." Claim 1 having been rejected on the 24th of March, 1866, Sargent, on the 29th of June, 1866, changed the claim to the form it has in the original patent as issued, and his attorneys at the same time, in a letter to the Patent Office, explained the new form of claim thus: "The substance of the first substituted claim consists essentially in providing a rotating tumbler in connection with the bearing on which it rests and the stem of the bolt-work which rests against it, when said tumbler is isolated or disconnected from the combination-wheels, so

Opinion of the court.

that any inward motion of the bolt against this tumbler will expend its force against the bearing on which the tumbler turns and rests, and will not reach or affect the permutation-wheels." The attorneys also said: "In Mr. Sargent's device it will be observed that the combination or permutation wheels are on a different bearing, and located at a distance from the revolving-tumbler I, and never in contact therewith, so that the two are practically isolated from each other, and there is no connection between them except through the lever H, which is not within the reach or influence of the pick-lock." And the specification of the original patent contained this language: "The principal advantage of this tumbler consists in its isolation, so to speak, from the combination-wheels and the main working parts. It rests alone on its bearing *q*, the only part connected being the cog-bar H. In ordinary locks the sliding bolt extends back in direct connection with the main working mechanism, and by its constant action and the strain that comes upon it frequently disarranges those parts. This is especially true when the stem or projection *t* of the heavy bolt of the safe-door rests against the sliding-bolt. In this case, when force is applied to the bolt, the wrenching strain upon the bolt and mechanism is very great. In my lock it will be seen that this difficulty is obviated, for any strain that comes upon the circular tumbler, either from the stem *t* or any other source, is simply expended upon the strong bearing *q*, and does not reach back to the combination-wheels or any part of the working mechanism. This is of the utmost importance."

It is urged that emphasis was thus laid on the fact that the turning-bolt or tumbler was mounted on a different bearing from the permutation-wheels, and that it was that arrangement which prevented pressure on it from reaching back to the permutation-wheels; that the original claim, in speaking of the rotating tumbler as "separated and isolated in action from the permutation-wheels," meant that it was

Opinion of the court.

mounted on its own separate bearing, and did not allow of its being mounted in any other way ; that the specification of the reissue does not say that the tumbler I "rests alone on its bearing *q* ;" that the limitation thus contained in claim 1 of the original patent is not found in claim 1 of the reissue ; and that thereby an unlawful expansion was made, the application for the reissue having been filed more than five years after the original patent was granted.

But we think the reissue is not fairly open to this objection. The tumbler in the one claim and the bolt in the other are the same instrument. The words "rotating-tumbler I," in the original claim, refer to the tumbler described as resting on a bearing "around which it turns." The claim of the reissue, in saying that the bolt I "turns on a pivot or bearing," expresses the same idea. The words in the claim of the reissue, "when said bolt I is used in a lock having no ordinary sliding lock-bolt, and in connection with the separate bolt-work of the door, and so arranged as to receive the pressure of the said bolt-work without transmitting it to the wheels or other equivalent works of the lock," are justified by these words in the original claim, "and so arranged that any inward pressure upon the bolt will be exerted on the bearing of said tumbler, and have no action or effect upon the said permutation-wheels." The word "bolt" in the claim of the original meant what in the claim of the reissue is called "the separate bolt-work of the door," because what is called in the former "the rotating tumbler I," is called in the latter "a bolt, I, which turns on a pivot or bearing." The proviso in the claim of the reissue, that the bolt I is to be "used in a lock having no ordinary sliding lock-bolt" does not expand the claim but, if anything, restricts it. The statement, in the claim of the reissue, that the bolt I is so arranged as to receive the pressure of the separate bolt-work of the door without transmitting it to the wheels, is justified by the statement in the original claim, that the rotating tumbler I is so arranged that any

Opinion of the court.

inward pressure upon the bolt will be exerted on the bearing of the tumbler, and have no action or effect on the permutation-wheels.

The words in the original claim, "when separated and isolated in action from the permutation-wheels," applied to the rotating tumbler, do not indicate that the mounting of the tumbler alone on its bearing is required, but mean no more than that the tumbler shall be separated and isolated in action from the wheels; and the words of the claim of the reissue have no broader meaning in that regard. If the rotating tumbler or bolt is thus isolated in action from the wheels, the arrangement referred to in both claims is reached. The patentee set forth, as he was bound to do, the method he used and which he thought advisable; but any method of mounting the revolving bolt which effects the isolation referred to is within either claim. The words "or other equivalent works of the lock" have no expanding force.

The invention of Sargent consists in combining with the ordinary combination-wheels, and the other working parts of a combination lock which has no sliding lock-bolt, a bolt turning on a pivot or bearing, which is so isolated or removed from contact with the said wheels as to receive any pressure or strain which may be applied through the separate bolt-work of a safe door, and cut off the communication between the bolt-work of the door and the wheels or fence lever of the lock, so that the position of the slots in the wheels cannot be determined, for picking the lock, as in the use of the ordinary sliding lock-bolt, which extends back so as to connect with the wheels. The turning bolt is an incomplete cylinder, or one in which parts of the periphery are cut away. An extended part of the bolt-work of the door bears against a part of the complete periphery of the turning-bolt, in such manner that the turning-bolt receives all pressure and does not allow it to reach the combination-wheels. The ordinary sliding lock-bolt is, therefore, dispensed with.

Opinion of the court.

Three alleged anticipating devices are set up—defendant's exhibit A, defendant's exhibits C and D, and defendant's exhibit E.

Exhibit A has in the lock-casing a sliding-bolt and also what is alleged to be a turning-bolt. But the latter is only the well-known swiveling-dog, long used to prevent the retraction of sliding-bolts, and so arranged as to be swiveled by a spring when the combination-wheels are gated. As a consequence, the stump or fence bears on the wheels not only with the pressure of its own weight but with the added force of the spring. Any swiveling force applied to the dog causes the stump to bear on the peripheries of the wheels, and the picking of the lock is facilitated. The dog prevents the retraction of the sliding-bolt. In Sargent's patent the lever which carries the stump is so constructed that no turning of the revolving-bolt can bring the lever work against the wheels. The Sargent revolving bolt must be acted upon by the user, while the swiveling-dog in exhibit A is an automatic latch. In Sargent's structure the revolving bolt, the lever which carries the stump, and the wheels are sufficient to prevent the retraction of the bolt-work; while in exhibit A the sliding-bolt, the swiveling-dog, the stump-lever and the wheels are all of them necessary.

The drawings exhibits C and D show the Linus Yale lock, which is also illustrated by a lock mechanism. It is a revolving lock which permits and prevents the retraction of the bolt-work of the door, and there is no sliding-bolt. But there are no permutation wheels or revolving-tumblers, nor any oscillating or sliding tumblers; but the ancient device of pins is used to prevent the revolution of the bolt, the pins entering into holes in the bolt; and a cross strain can be brought upon the pins, making the picking of the lock comparatively easy. Moreover, the bolt is not isolated from the pins as it is from the wheels in Sargent's lock, but parts of the pins are in sockets in the bolt. The pins are thus in immediate connection with the bolt, while Sargent inter-

Opinion of the court.

poses lever-work between the bolt and the wheels, to effect the isolation of the bolt.

In the Butterworth padlock, exhibit E, there is a revolving-bolt combined with the wheel-tumblers by means of a lever; but there is no "separate bolt-work of the door," which is one element of the claim in Sargent's reissue. Of this padlock the plaintiff's expert, Mr. Henry B. Renwick, says: "The padlock has the ordinary hasp attached to the case, and the bolt acts to prevent this hasp from being drawn away from the axis upon which the bolt revolves, and not to prevent bolt-works from being forced towards that same axis. The hasp is a contrivance which must be used with two staples, or one staple and a slotted bar, all of which must be outside of the door. Whereas, on the contrary, bolt-works must be inside of the door, and shoot into sockets in the jambs, it being clear that the hasp could not be used in place of bolt-works, or bolt-works in place of a hasp, even if the former were located outside of the door. I do not think that this lock would even suggest the idea of the combination referred to in the first claim of the Sargent reissue. In order to make the lock fit to be used in combination with bolt-works, even after such idea had been suggested, it would be necessary: first, to provide the lock-case with means of securing it to the door; second, to elongate the spindle and so contrive it and the dial-plate that they could be separated from the wheel-tumblers and put together again, with the door between them; third, to alter the direction of the slot in the case through which the hasp enters, so that the tail of the bolt-works could press upon the revolving-bolt in the line of a radius thereof. If the tail of bolt-works were introduced into the present slot, any hammering of the bolt-works by the handle upon the periphery of the revolving-bolt would tend to turn the revolving-bolt upon its axis, and thus cause the stump to be pressed upon the wheel-tumblers in such a manner as to facilitate picking, this result being due to the fact that the

Opinion of the court.

line of direction through the slot is not in line of the radius to the bolt, but in line of a sector thereof; further, the revolving-bolt in a padlock, owing to its being necessary that it should enter a slot in the hasp, is weakest at the very point where it should be strongest, if it were to be used in connection with bolt-work; and any good constructor would alter the revolving bolt of the padlock, so that it would be strongest where it is now weakest, in case it was desired to use a revolving bolt in combination with bolt-works." It is a marked feature of Sargent's lock that the direction of the pressure of the bolt-work of the door on the revolving-bolt is in the line of a radius of that bolt, so that the pressure has no tendency to revolve the bolt. This feature is not found in the Butterworth padlock.

We are of opinion that, as against anything found in the old structures, there was patentable novelty in what Sargent did and what he claimed.

As to the question of infringement, the defendant's lock, Cole No. 2, has in it a bolt which turns on a pivot, and is substantially identical with the like bolt in Sargent's patent. It prevents and permits the retraction of the bolt-work of the door in the same manner as Sargent's bolt. There is no sliding-bolt. The turning-bolt is arranged to serve as a stop to two sets of bolt-works, instead of one; but in respect to one set, there is the same mode of operation in both locks. As the claim of Sargent's reissue does not require that the bearing of the rotating-bolt should be distinct from the bearing of the wheels, the fact that in Cole No. 2 the bearing of the turning-bolt is on the stud on which the wheels turn, makes no difference in principle, because the action of the bolt is as wholly separated and isolated from the wheels in the one lock as in the other, and in each the strain from the bolt-work is expended on the turning-bolt and not on the wheels. So, too, the fact that in Sargent's patent the fence-lever is connected with the turning-bolt by a rack on the end of the lever engaging

Opinion of the court.

with cog-teeth on the bolt; while in Cole No. 2 the end of the lever is pivoted directly to the turning-bolt, does not affect the identity of the arrangement as part of the combination covered by claim 1 of the reissue. The defendant's lock must be held to infringe that claim.

On the question of damages, the defendant contends, that there was no sufficient or legal proof that the plaintiff suffered the damages reported and adjudged, or any other damages. The action of the master, the character of the exceptions to his report, and the view taken by the Circuit Court, are fully shown by its opinion, reported in 17 Blatch. C. C. 244, which was as follows:

"The master reports that there is no basis, from the proofs adduced before him, to find what profits have been made by the defendant by the use of the 'turning-bolt' (the infringing device) in the locks made and sold by it; and that therefore, on the testimony before him, he cannot find what profits, if any, are due from the defendant for the use of the 'turning-bolt.'

The patent on which this suit is brought is a reissue granted January 2d, 1872. The master reports that, after that time and in 1873, in consequence of the defendant's offering and selling to the plaintiff's principal customers and to the trade generally, locks containing the infringing device, at a less price than the plaintiff was obtaining, a reduction of prices was enforced on the plaintiff, such reduction being, in round numbers, \$1 on each No. 5 lock and \$2 on each No. 3 lock. Exception one, of the defendant, is to such finding and report, and alleges that the master should have reported that no such reduction was enforced and that there was no proof of the amount of any reduction caused by the defendant's infringement and that there was no method of computing such reduction, even if it actually existed.

The master also reports that it is in evidence that, during the period covered by the accounting, the plaintiff could

Opinion of the court.

have manufactured, in addition to the locks he did manufacture and without materially increasing his manufacturing facilities, all the locks manufactured and sold by the defendant. Exception 2 of the defendant is to such finding and report, and alleges that the master should have reported that no such additional manufacture by the plaintiff was possible, or that it was impossible without a very great extension of his facilities.

The master also reports that it is in evidence that, during the period covered by the accounting, the plaintiff would have made sales to many of the persons who were induced to purchase from the defendant, at his own established prices, had not the defendant offered its locks at lower prices. Exception 3 of the defendant is to that part of the report, and alleges that the master should have found and reported that no such sales would have been made; or that, even if made, they would not have been at the plaintiff's own established prices.

The master also reports that the plaintiff has suffered damages in respect to the matters to which exceptions 2 and 3 relate. Exception 4 of the defendant is to that part of the report, and alleges that the master should have found and reported no damage whatever from the competition of the defendant.

The master further reports that the locks sold by the defendant contained, in addition to the 'turning-bolt,' a device patented by the Rosner patent, for which infringement a claim is made against the defendant in another suit; that as to the proportion of the reduction of prices above set forth, which should be allowed to the device claimed under the Rosner patent, it is claimed by the plaintiff and nowhere effectually disputed by the defendant, 'that, in computing the profits on these locks, one-third belonged to and was charged by him to the Rosner patent,' and that, admitting this proportion, and allowing, in addition thereto, for any superior external attractions of the defendant's

Opinion of the court.

locks, and for the number of combinations which they had over those of the plaintiff, and for the shape of the case of the lock, and for the commercial success of the defendant in effecting sales, where the plaintiff would have failed, the master is of opinion that the plaintiff is entitled to recover from the defendant, as damages, one-half of the amount of the reduction in prices caused by the defendant since January 2d, 1872; that is, on 1,009 No. 3 locks, \$1 per lock, being \$1,009, and on 13,524 No. 5 locks, at 50c. per lock, \$6,762, being a total of \$7,771. Exception 5 of the defendant excepts to the finding and reports that the plaintiff is entitled to recover from the defendant, as damages, one-half of the amount of the reduction in prices caused by the defendant since January 2d, 1872, and alleges that the master should have reported 'no reduction in prices or no proof of such,' caused by any infringement by the defendant since said date, and 'hence no damages' to the plaintiff, 'and, consequently, no method of calculating them.' Exception 6 of the defendant excepts to the report for that the master erred in making the apportionment of the alleged reduction in the plaintiff's prices, charging one-half thereof to the alleged infringement of the 'turning-bolt' patent, and alleges that no basis existed, in the proof or in law, for such or for any apportionment, or for any award of damages. Exception 7 of the defendant excepts to the report for that the master erred in assessing damages which are not the damages suffered by the plaintiff, but are those suffered by the firm of Sargent & Greenleaf, and alleges that the master should have reported that the damage, if any, found to have been suffered by said firm, is not the damage of the plaintiff, who is only one member of said firm, but that the plaintiff's damage is merely a portion thereof. Exception 8 of the defendant excepts to the report for that the master erred in finding and reporting, as damages, the sum mentioned in his report, or any damages whatsoever, and in not reporting that there was no proof of any actual

Opinion of the court.

damage suffered by the plaintiff from the alleged infringement.

The defendant contends that the competition of the defendant was not the sole cause of the reduction of the plaintiff's prices, and that the proportionate effect of the defendant's competition is not attempted to be estimated or ascertained by the proofs. It alleges that the defendant is not responsible for the reduction made in 1873; that there were many other causes which contributed to this reduction; and that the lowering of prices was caused principally by the competition of other fire-proof safe lock-makers, and notably the New Britain Lock Co., by the fact that safe-makers were making and threatening to make their own safe locks, and by the general lowering of the prices of material and labor and the depression of business.

Reduction of prices, and consequent loss of profits, enforced by infringing competition, is a proper ground for awarding damages. The only question is as to the character and sufficiency of the evidence, in the particular case. I think that on the whole evidence, the reduction of prices by the plaintiff, after January 2d, 1872, on safe-locks containing his invention, is shown to have been directly and solely caused by the defendant's infringement.

The master, in his report, allows damages only for the reduction of prices on the locks sold by the plaintiff; that is, 1,009 No. 3 locks and 13,524 No. 5 locks. Although the master states that the plaintiff suffered damages in losing the sale of locks sold by the defendant, he awards no damages for that cause. He confines his award to the loss on the locks which the plaintiff sold.

The defendant also contends that the plaintiff is not entitled to recover from the defendant, as damages, the entire amount of the reduction enforced by the defendant's competition, but only the damages occasioned by the effect of the presence of the infringement; that the burden of proof is on the plaintiff to fix the value of, and to separate the ef-

Opinion of the court.

fect of, the infringing devices; that he failed to do so by any proper proof; and that no basis was afforded to the master on which such damages could be computed. But, as the master allowed damages only for the reduction of prices on the locks sold by the plaintiff, and as the essential feature of those locks was the 'turning-bolt' device, and as an essential feature of the infringing locks was the infringing 'turning-bolt' device in them, and as the plaintiff could not sell his 'turning-bolt' device unless it was embodied in a lock, and as he was thereby enabled to make his profit on the entire lock, and as he was deprived by the acts of the defendant in selling at low prices locks containing the patented 'turning-bolt' device of the profit he would otherwise have made on the locks which he actually sold containing the 'turning-bolt' device, it seems plain that the defendant's infringement must be held to have caused the entire loss of the plaintiff by the reduction of prices, after allowing a proper sum for any other patented device contained in the defendant's locks and for any other causes which gave to the defendant an advantage in selling its locks. This is the basis on which the master proceeded, and it seems to me, on a consideration of the evidence, that the master has made all proper allowances and has arrived at a correct conclusion in fixing as damages, one-half of the amount of reduction in prices.

The plaintiff, as the owner of the patent, is entitled to recover the damages in this case. He may be accountable to his copartner for a part of them, but the copartner could not sue on the patent, for such damages or any part of them."

This is a case where the patentee granted no licenses and had no established license-fee, but supplied the demand for his lock himself, and was able to supply that demand. The market for the lock was limited to safe-makers. No one but a safe-maker wanted or would buy such a lock. The master was unable to determine, from the proofs, what profits, if any, the defendant had made from the use of the

Opinion of the court.

turning-bolt. He disallowed all items of damage from the loss to the plaintiff of the sale of infringing locks sold by the defendant, and confined his award to the enforced reduction of price on the locks which the plaintiff sold, caused by the infringement. That this is a proper item of damages, if proved, is clear. It is a pecuniary injury caused by the infringement, and is the subject of an award of damages, although the defendant may have made no profits and the plaintiff may have had no established license-fee. As the plaintiff, at the time of the infringement, availed himself of his exclusive right by keeping his patent a monopoly, and granting no licenses, the difference between his pecuniary condition after the infringement and what his condition would have been if the infringement had not occurred is to be measured, so far as his own sales of locks are concerned, by the difference between the money he would have realized from such sales if the infringement had not interfered with such monopoly, and the money he did realize from such sales. If such difference can be ascertained by proper and satisfactory evidence, it is a proper measure of damages. The damages to be recovered (R. S. §§ 4919, 4921,) are "actual damages;" and they may properly include such losses to the plaintiff as were allowed in this case. *McComb v. Brodie*, 1 Woods, 153, 161; *Philp v. Nock*, 17 Wall. 460, 462 [8 Am. & Eng. 470.]

The turning-bolt was the essential feature of the Sargent lock. The defendant adopted Sargent's arrangement, and then reduced the price of the lock, forcing Sargent to do the same in order to hold his trade. The evidence shows that the reduction of prices by Sargent was solely due to the defendant's infringement. The only competitor with Sargent in the use of his turning-bolt arrangement, during the period covered by the accounting, was the defendant.

We think the master made proper allowances for all other causes which could have affected the plaintiff's prices; that the proper deduction was made for the use of the Rosner

Opinion of the court.

device in the defendant's lock; and that the damages awarded are no greater than the testimony warranted.

The decision that the plaintiff, as owner of the patent, was entitled to recover the damages, was correct.

The bill alleges infringement of the reissue generally and especially of the first claim. The answer alleges that the reissue is not for the same invention as the original patent. The defendant contends that this is true as to claims 2 and 4 of the reissue, and that as no disclaimer of those claims was entered at the Patent Office before this suit was brought, the recovery in this case should have been without costs, under the provisions of §§ 4917 and 4922 of the Revised Statutes, and the decision in *Gage v. Herring*, 107 U. S. 640, 648 [14 Am. & Eng. 454.] That case holds that the invalidity of a new claim in a reissue does not impair the validity of a claim in it which is only a repetition and separate statement of a claim in the original patent. It also holds that a reissued patent is within the letter and the spirit of the provisions of §§ 4917 and 4922; and that where a defendant has infringed such a restated valid claim of a reissue, the plaintiff, on filing a disclaimer of the new and invalid claims of the reissue, may have a decree, without costs, for the infringement of such valid claim, where there has been no unreasonable delay in entering the disclaimer.

There can be no doubt that claim 4 of the reissue was valid, as an unlawful expansion of the original patent, on an application for the reissue filed more than five years after the original patent was granted. But the patent has expired, and therefore no disclaimer can now be filed. There was no unreasonable delay in filing a disclaimer, as the validity of claim 4 was sanctioned by the Commissioner of Patents in granting the reissue, and this suit was commenced in July, 1872, and the claim was not held invalid by the Circuit Court (both the interlocutory and final decrees having been entered before the decisions of this court, at October term, 1881, on the subject of reissued patents, were made.)

Notes and citations.

The result, therefore, is that *the decree below must be reversed as to the award of costs and affirmed in all other respects*, with interest until paid, at the same rate per annum that decrees bear in the courts of the State of New York, and the case be remanded to the Circuit Court, with a direction to modify the decree accordingly. Each party will bear his own costs in this court and one half of the expense of printing the record. *Silsby v. Foote*, 20 Howard, 378, 387 [6 Am. & Eng. 388.]

117 U. S. 554.

Notes:

3. Partnership accountability :

Kinsman v. Parkhurst, 18 How. 289 [6 Am. & Eng. 273.]

Ambler v. Whipple, 20 Wall. 546 [9 Am. & Eng. 410.]

Wade v. Metcalf, 129 U. S. 202.

4. Absence of license-fees, royalty, &c. :

Suffolk Mnfg. Co. v. Hayden, 3 Wall. 315 [7 Am. & Eng. 405.]

Philp v. Nock, 17 Wall. 460 [9 Am. & Eng. 84.]

Root v. Railway, 105 U. S. 189 [13 Am. & Eng. 556.]

United States v. McKeever, 23 O. G. 1530 [14 Am. & Eng. 414.]

6. Diligence in filing disclaimer :

O'Reilly v. Morse, 15 How. 62 [5 Am. & Eng. 483.]

Seymour v. McCormick, 19 How. 96 [6 Am. & Eng. 282.]

Silsby v. Foote, 20 How. 378 [6 Am. & Eng. 392.]

Smith v. Nichols, 21 Wall. 112 [9 Am. & Eng. 425.]

Dunbar v. Meyers, 94 U. S. 187 [11 Am. & Eng. 59.]

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.]

Notes and citations.

Patent in suit:

No. 57,574. Sargent, J. August 28, 1866. Reissue No. 4,696. January 2, 1872. Lock.

OTHER SUITS ON SAME PATENT :

Sargent v. Yale Lock Mnfg. Co., 1879. 17 Blatch. 244 ; 4 Ban. & Ard. 574 ; 17 O. G. 105.

Sargent v. Yale Lock Mnfg. Co., 1879. 17 Blatch. 249 ; 4 Ban. & Ard. 579 ; 17 O. G. 106.

Cited:

IN SUPREME COURT IN:

Gardner v. Herz, 1886. 118 U. S. 180 ; Bk. 30 L. ed. 158.

Clark Pomace Holder Co. v. Ferguson, 1886. 119 U. S. 335 ; Bk. 30 L. ed. 406.

Dryfoos v. Wiese, 1888. 124 U. S. 32 ; Bk. 31 L. ed. 362.

IN CIRCUIT COURTS IN :

Kittle v. Hall, March, 1887. 30 Fed. Rep. 239.

Creamer v. Bowers, May, 1888. 35 Fed. Rep. 207.

IN TEXT BOOKS:

2 Abb. Pat. Laws, 1886. pp. 242, 282, 350, 360, 376.

Walker on Pats., 2d ed. 1889. pp. 154, 155, 156, 413, 420.

Syllabus.

YALE LOCK MANUFACTURING COMPANY, APPELLANT, v. HALBERT S. GREENLEAF.*

117 U. S. 554-559. Oct. Term, 1885.

[Bk. 29, L. ed. 952; 35 O. G. 386.]

Reversing Greenleaf v. Yale Lock Mnfg. Co., 17 Blatch. 253

Argued March 16, 1886. Decided March 29, 1886.

Particular reissued patent. Novelty. Mechanical skill. Construction of patents.

1. Claim 1 of reissued letters patent, No. 4,488, G. Rosner, July 25, 1871, (original No. 30,092, September 18, 1860,) Permutation Lock, "In a permutation lock, in combination with a set of wheels consisting each of an outer ring or rim and a central disc or hub, a set of fastening devices or bolts, *r, r*, which is made to fasten or unfasten said parts composing the wheels by the insertion of a key through each or all of the wheels, whereby the combination of the lock may be changed, substantially," &c., construed.

In complainant's lock the key fitted closely in each of the wheels through which it passed, so that they were held in position by the key, while in the anticipating lock the key passed through irregular apertures in the wheels, permitting them some freedom of movement, and, therefore, the key of complainant's lock performed an office not performed by the key in the anticipating lock. *Held*, first, that the difference between the two structures did not avoid anticipating the patent, because the shape and size of the keyholes were not mentioned in the claim of complainant's patent as one of the elements of his combination, although information in this respect was given in the specification.

Held, secondly, it required no invention but only mechanical skill to make the anticipating lock correspond precisely in the fitting of the key in the wheels with complainant's lock, and therefore the anticipation of complainant's claim was complete. (p. 317.)

See Explanation of Notes, page III.

Statement of the case.

2. The scope of letters patent must be limited to the invention covered by the claim, and while the claim may be illustrated it cannot be enlarged by language used in other parts of the specification. (p. 319.)

[Citations in the opinion of the court:]

Keystone Bridge Co. v. Phoenix Iron Co., 95 U. S. 274 [11 Am. & Eng. 364.] p. 319.

Railroad Co. v. Mellon, 104 U. S. 112 [13 Am. & Eng. 200.] p. 319.

Atlantic Works v. Brady, 107 U. S. 192 [14 Am. & Eng. 380.] p. 319.

Slawson v. Railroad, 107 U. S. 192 [14 Am. & Eng. 475.] p. 319.

Phillips v. Detroit, 111 U. S. 604 [15 Am. & Eng. 269.] p. 319.

Appeal from the Circuit Court of the United States for the Southern district of New York.

Statement by Mr. Justice Woods:

This was a bill in equity brought by the appellee, Halbert S. Greenleaf, to restrain the infringement by the appellant, the Yale Lock Manufacturing Company, of the first and fourth claims of the reissued letters patent granted to George Rosner, July 25, 1871, for an improvement in permutation locks. The original patent bore date September 18, 1860.

The defence was that the alleged invention and substantial and material parts thereof claimed as new were, prior to any invention thereof by said George Rosner, known and publicly used by divers persons in this country, and that among such persons were D. H. Rickards, of Boston, and the firm of Evans & Watson, of Philadelphia.

The Circuit Court decided that the patent was valid, and that the defendant had infringed, and, upon the report of a master of the damages sustained by the plaintiff, rendered a decree in his favor for \$2,968.50. The present appeal brings that decree under review.

The specification and drawing of the Rosner reissued letters patent as well as of the Rickard application both referred to in the opinion of the court are as follows:

Statement of the case.

GEORGE ROSNER, OF ROCHESTER, NEW YORK,
ASSIGNOR TO HALBERT S. GREENLEAF, OF SAME
PLACE.

IMPROVEMENT IN PERMUTATION LOCKS.

Specification forming part of Letters Patent, No. 30,092, dated
September 18, 1860 ; reissue No. 4,488, dated July 25, 1871.

To all whom it may concern :

Be it known that I, George Rosner, of the city of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Locks, of which the following is a specification :

This invention consists in combining with a set of permutation wheels or tumblers, constructed each of a rim and center, an arrangement of bolts or equivalent devices, which fasten and unfasten said rims and centers by the use of a key inserted through holes in the cams in the wheels by which said bolts or equivalent devices are operated, the effect being to enable the relative position of the rims and centers to be changed so as to make a new combination by moving the driving-pins to different positions relatively to the slots in the wheels. It further consists in the arrangement of parts, as hereinafter described.

In the drawing, Figure 1 is a central vertical section of my improved lock ; Fig. 2, a face view of the lock-bolt and tumbler and connecting parts removed from the lock-case ; Fig. 3, a face view of one of the permutation wheels, together with a portion of the surrounding box that incloses it ; Fig. 4, a section of the same ; Fig. 5, a perspective view of the vertically-acting portion of the sliding tumbler ; Fig. 6, a view of the key, by the use of which the combination of the wheels is changed ; Fig. 7, a view of the device for closing and unclosing the key-hole in the back of the lock.

A represents the case of the lock attached to the door or other body B. C is the spindle, which is made up of a knob, *a*, and interior turning part *b*, connected by means of

Statement of the case.

a screw-bolt, *c*, which allows the knob to be taken off at pleasure. The outer end of the interior portion has a head or shoulder, *d*, which prevents the spindle from being driven in. D is the cam, which rests loosely upon the spindle, so that the latter can be drawn endwise through it; and E is the disk or head, on which rests the dog F, which forms the vertically-sliding portion of tumbler G. The dog slides up and down in a guide of the division-plate H, and its connection with the sliding tumbler in the rear is made by means of a notch, *f*, Fig. 1, made therein, in which rests a bearing, *g*, Fig. 2, of the tumbler. The tumbler G rests between guides of the block-bolt J, and moves bodily with it backward and forward as the bolt is thrown. The bearing *g* is made of sufficient length to allow the throwing movement in the notch of the dog. The tumbler G is held up by a spring, I, when the spindle is thrust inward to engage with the wheels, as shown in Fig. 1. When the spindle is drawn outward or backward the cam D comes in contact with said spring and depresses it so as to allow the tumbler to fall. This, however, can occur only when the dog F comes in line with all the notches of the combination wheels. When this is the case the tumbler falls with the dog, thus engaging with the cam D', and the bolt can be thrown in or out. The cam receives motion on the retraction of the spindle by means of a pin, *h*, on the back of disk E, which strikes into and engages with a notch or slot, *i*, of the face of the cam. When the lock-bolt is protruded projections *k k* of the tumbler engage with stops *l l* of the case, and thus hold the bolt in position. It is only when the tumbler falls, as before described, that the bolt can be retracted. K represents a stationary stud of the box L, which forms the back of the lock and holds the combination wheels. On this stud are slipped washers M M, one after another, as fast as the wheels N N are applied. These wheels rest and turn upon the horizontal bearings *m m* of the washers, while the vertical flanges *n n* of the washers divide them and prevent their contact in turning. The wheels N N are composed of an annular

George Rosner, Permutation Lock.

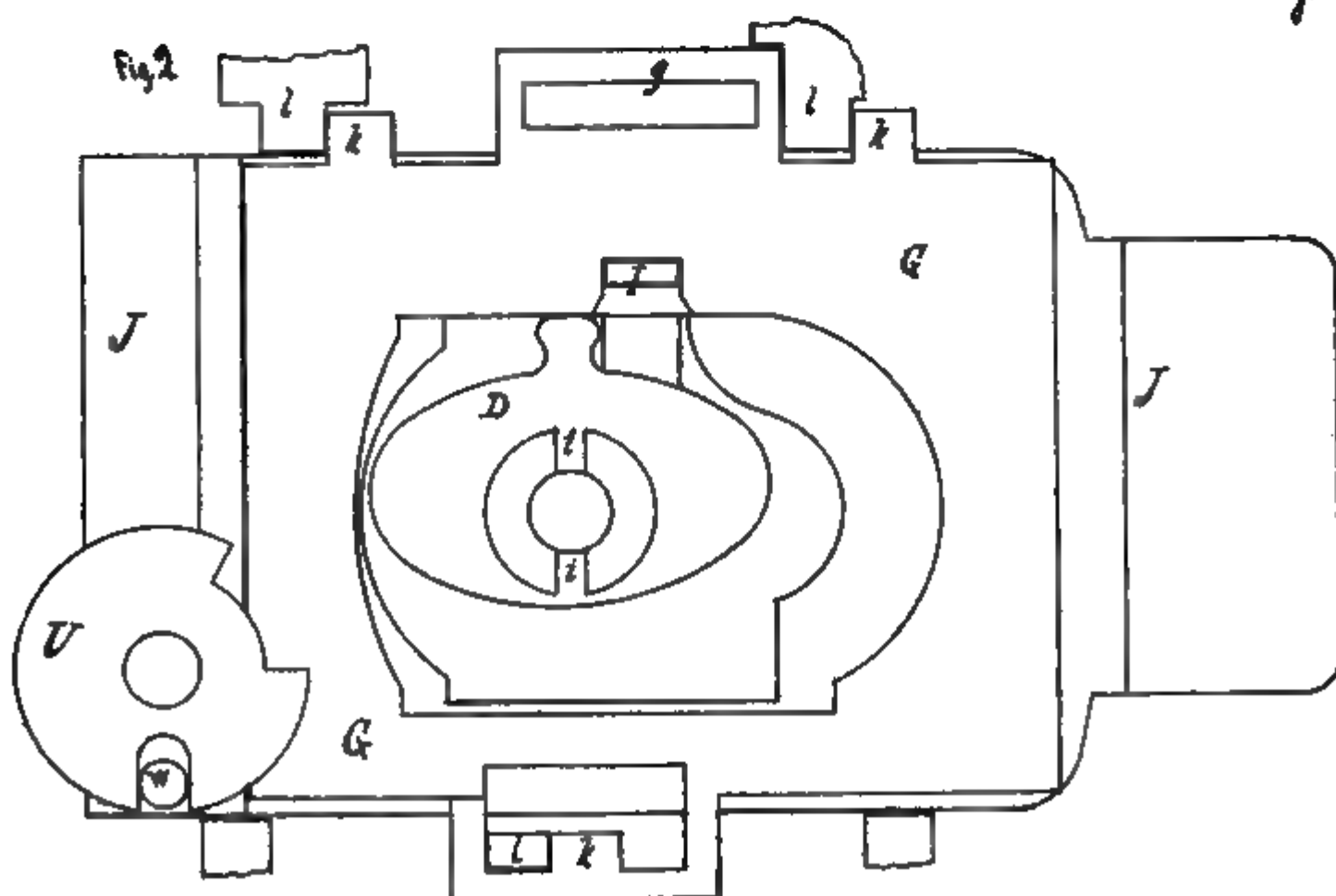
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Sheet 1. of 2 Sheets

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Fig. 1

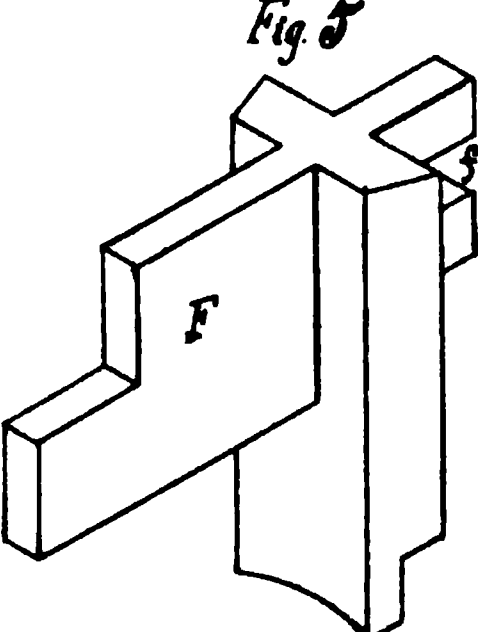
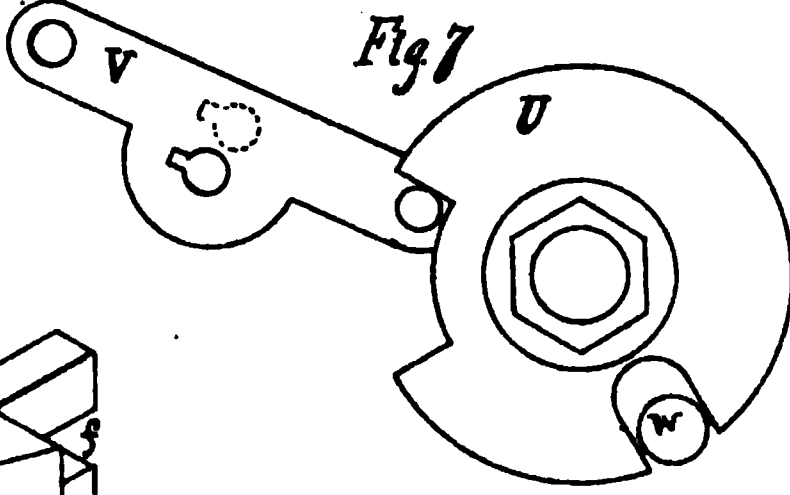
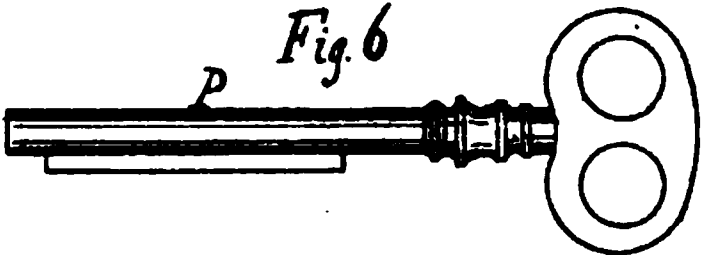
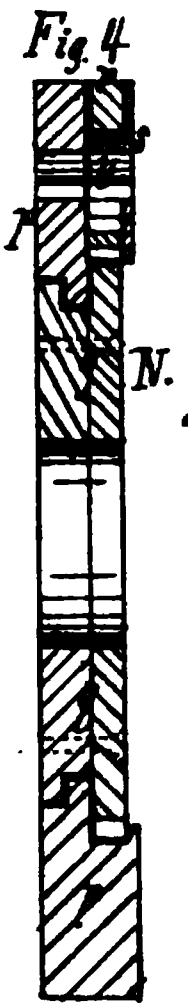
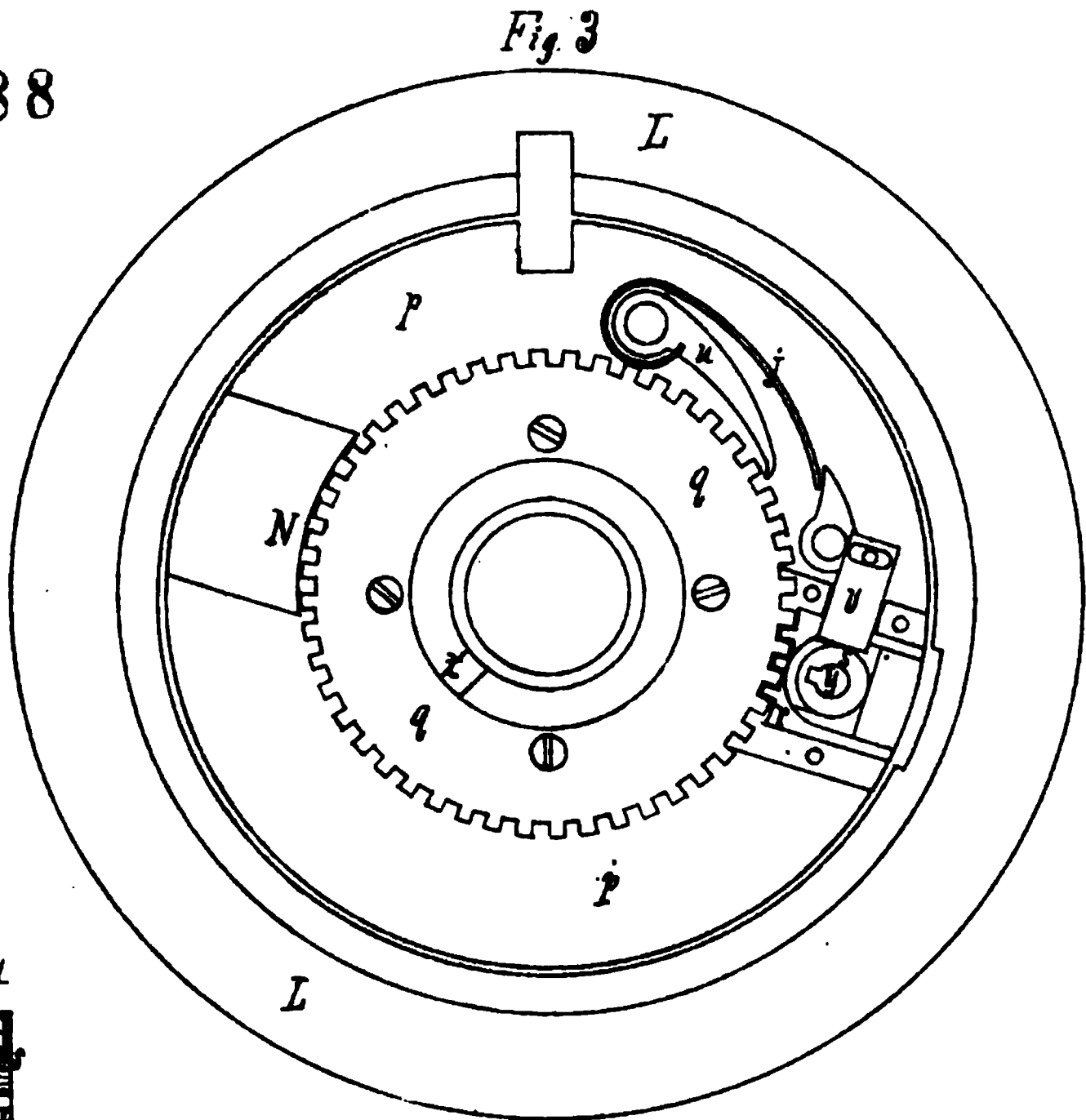
WITNESSES
R. F. Ogden
C. W. Woodward



George Rosner, Permutation Lock.

Reissue.
Sheet 2, 2 Sheets.

4488



WITNESSES
R. F. Asgood
C. N. Woodward.

George Rosner INVENTOR, BY
Burke Fraser & Asgood
Attys. Rochester
N. Y.

Statement of the case.

outer rim, p and a , center or hub, q , formed of two pieces, the parts composing the center or hub being rigidly secured together so as to allow them to move the same as if they were a single piece. As the rim and center are relatively adjusted from time to time to bring the driving-pins of the centers in different relative positions with the slots of the rims, so the combination of the lock is changed.

Prior to my invention, in order to change the combination where a single set of wheels only was used, made up each of a center-hub and rim, the wheels had to be removed from the lock and adjusted by hand and then replaced.

I obviate this difficulty by the following arrangement: Opposite the center or hub q of each wheel, and located in the outer rim, I place a locking device or bolt, r , which, when forced in against the said center or hub, holds the same firmly in place with the outer rim, but when thrown out disengages said parts and allows the centers to turn free while the rims remain stationary. Against the locking device or bolt r rests a cam or eccentric, s . Through each or all of these cams, and also through the back plate of the lock, is inserted a key, P , Fig. 6, by turning which it will be seen that said locking or fastening device may be forced in or drawn out at pleasure. When the key is inserted and the fastening device thrown back, it will be seen that the rims of the wheels are held stationary by the key, while the centers may be turned to any different position by the spindle, thus setting the lock to a new combination. Motion is communicated from the disk E to the first wheel, and from one wheel to another, by means of pins t t , which strike together during the revolution. This arrangement of pins was in use before my invention.

The novelty in the first part of my invention consists in the combination of the fastening devices r with the wheels, constructed of three parts each, an outer rim and a center or hub composed of two parts, secured together so that by inserting the key the parts composing the wheels may be loosened and the outer rims held stationary while the cen-

Statement of the case.

ters or hubs are turned to a different position by the action of the spindle to rearrange the combination, and then the parts locked in place again, and all accomplished without removing the wheels themselves from the lock. In all prior locks with a single set of wheels, (each wheel made up of a rim and center hub,) so far as I am aware, the wheels had to be removed from the lock and the combination changed by hand.

If desired, a click, *u*, may be employed, in connection with the first wheel, to stop the motion opposite a given number and not half-way between. A block, *v*, may also be used, acted upon by the spring *j*, to hold the cam *s* when the latter has made a half revolution. This prevents any accidental motion given to the part *r*.

U represents a disk attached to the back part of the lock, which disk is partly rotated by the motion of the lock-bolt, which has a pin, *w*, fitted in a notch of the disk. At the latter part of the movement of the lock-bolt the pin suddenly turns the disk, thereby moving the lever V connected therewith and covering and uncovering the key-hole *y* accordingly which way the bolt is thrown. This is shown most clearly in Fig. 7.

What I claim, and desire to secure by Letters Patent is—

1. In a permutation lock, in combination with a set of wheels consisting each of an outer ring or rim and a central disk or hub, a set of fastening devices or bolts, *r r*, which is made to fasten or unfasten said parts composing the wheels by the insertion of a key through each or all of the wheels, whereby the combination of the lock may be changed, substantially as herein specified.

2. In connection with the fixed stud K, the annular bearings M M, provided with horizontal bearings *m* and vertical flanges *n n*, which are slipped upon said stud to hold the wheels, as described.

3. The combination of the disk U and lever V with the lock-bolt and case of the lock for the purpose of covering the key-hole when the bolt is protruded, as herein described.

Statement of the case.

4. The disk E attached to the spindle C, when combined with the dog F and the wheels N N N, so as to support said dog from said wheels when the spindle is engaged with the wheels, and to allow said dog to fall when disengaged, substantially as specified.

In witness whereof I have hereunto set my hand this 8th day of June, 1871.

GEORGE ROSNER.

Witnesses :

ARCHD. BAINE,

R. F. OSGOOD.

RICKARD'S APPLICATION.

To all persons to whom these presents shall come:

Be it known that I, D. H. Rickards, of Boston, in the County of Suffolk and State of Massachusetts, have invented certain new and useful Improvement in Locks, and that the following description, taken in connection with the accompanying drawings hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to have secured to me by letters patent.

The figures of the accompanying plate of drawings represent my improvements.

Figure 1 is a plan or top view of my lock with the plate removed.

Fig. 2 is a longitudinal, vertical section taken in the plane of the line A B, fig. 1.

Fig. 1 and fig. 3 is a transverse section taken in the plane of the line C D, fig. 1.

Fig. 4 is a detail view which will be hereinafter referred to.

My improved lock consists of a series of corrugated or scolloped plates with slots in each of them large enough to receive the end of the bolt when it is drawn back a sufficient

Statement of the case.

distance' to open the door. By a peculiar arrangement, which will be hereinafter explained, the lever which operates the bolt cannot be acted upon in any degree by the key until the said plates have been brought into the proper position to receive the bolt, which is thus secured against any tampering by "feeling" it with the key.

My improvements consist in the manner of connecting the notched plates to the gear wheels which move the same, by means of levers and in disengaging the levers from the gears when it is desired to set or change the position of the said gears, which can by this arrangement be turned without moving the plates.

a, a, a, a, in the drawings, represents the outer casing or frame work of the lock; *b b, c c, d d*, are three circular plates with their periphery notched or scalloped, as shown in Fig. 1, being made precisely alike and placed one over another in a stationary box; *e e, f f, g g, h h*, are three gear wheels, also made alike and having the same number of teeth in each of them, as there are scallops in the plates.

These gear wheels turn loosely on the centre stationary shaft *i i*, and are connected to the plates by means of the dog levers *k k k*, the palls of which engage with the teeth of the gears, being held therein by the bent springs *l l l*. One end of each of the levers bears against a shoulder in the notched plates, a stud or projection *m* of the said levers entering a hole made for the purpose in the plates. The levers can be disengaged from the teeth of the gear wheels and consequently disconnect the plates from the said gears by inserting a proper key or instrument *v* from the bottom or back of the lock, as shown in Fig. 3, leaving the gears free to be turned so that the combination of the lock can be changed. When the plates are disconnected from the gears they are held firmly in their places by the movable bars or rods, *n n n*, which are pressed upon by spiral springs, the end of said rods passing or slipping over the notches of the plates when the said plates are turned.

o o, in the drawings is the key, the shaft of which is hol-

D. H. Rickard.

Lock.

Filed Mch. 13. 1852.

Fig. 3.

Statement of the case.

low, so as to fit over the centre shaft *ii*, and has a stud or rod *p*, in its right angular projection *j*, which fits into proper holes in the gears *ff*, *gg*, *hh*, the said stud being long enough to enter into the hole of the bottom gear. When the slots *qqq*, of the plates are so placed by turning the gears as to bring the said slots over one another and opposite the bolt, in which position they are shown in the drawings, the bolt can be drawn back so as to enter said slots, by the projections *j*, of the key working in the forked end of the lever *rr*, attached to the bolt *s*, the stud *p*, of the key being drawn out of the holes in the gears, so as to entirely disconnect it from the said gears.

The operation of the lock is as follows:

The bolt being drawn back into the slots of the plates by the key working in the forked lever *rr*, as above described, the dog levers *kkk*, are disengaged from the teeth of the gears, as represented by dotted lines in Fig. 2, by inserting the cam key *v*, from the back of the lock and turning the said cam key into the position shown by dotted lines in Fig. 2, so that they can be turned while the plates are held by the pressure bars or rods *nnn*. By inserting the stud *p* of the key through all the holes of the gears, it will be seen that the gears can be turned to any desired position, one tooth or notch at a time, being held at each tooth by the pall or spring *ttt*. The stud *p* is then drawn out from the lower gear so as to turn only the two upper gears, the number of teeth which they are turned being noted, when the key is again drawn out so as to turn only the upper gear and the dog levers *kkk*, are then allowed to engage with the teeth of all the gear wheels. It will be seen by the above description that by turning the gears, when the levers are engaged with the teeth of the same, the slots in the plates will not remain one over the other, but will have different relative positions according to the number of notches which the gear wheels were turned. The slots *qqq*, can be brought over one another so as to allow the bolt to be drawn back, by turning the plates severally the same

Argument of counsel.

number of notches that their gear wheels were turned respectively. This number can be denoted by notches or projections on the knob of the key as shown in Fig. 4, with figures or letters on the same corresponding to the number of teeth in each wheel.

Having thus described my improvement in locks, I shall state my claims as follows :

What I claim as my invention and desire to have secured to me by letters patent, is—

First. Changing the combination of the lock by means of a cam key inserted from the back of the lock, by which the dog levers are disengaged from the teeth of the gear wheels, substantially as above described.

Second. I claim the manner of connecting the gear wheels to the plates, so that the said gears can be moved either with or without the plates, by means of the movable dog levers operating substantially as above described.

Third. I claim the movable pressure bars operated by spiral springs and working in the notches of the plates for the purpose of holding the said plates when they are disconnected from their gears.

D. H. RICKARDS.

Witness :

JOSEPH GARRETT,
LOWELL LINCOLN.

Mr. Frederick H. Betts, for appellant :

It is evident that Rosner believed himself to be the first person who used wheels whose rims were loosened from the hubs by a key while the wheels were in the lock, as distinguished from making the change by hand after removal of the wheel. In other words, he claimed to be the first inventor of "key-changing" tumblers or wheels provided with removable centers, as distinguished from "hand-changing" wheels or tumblers of the same class.

Argument of counsel.

But the subject matter of his claim was not new at the date of Sargent's patent.

It is evident upon inspection that Rickard's lock embodies the combination recited in Rosner's first claim. If the Rickard's lock had been a structure subsequent in date to Rosner's patent, it is clear that it would have been an infringement; being prior in date, it is as clearly an anticipation.

On the subject of substantial similarity, one of the defendant's witnesses, Mr. Towne, says: "Upon examination of defendant's Exhibit A, I find identically the same combination of parts to exist, and identically the same results to be accomplished by the combination of said parts."

The claim is not, on its face, limited to a combination in which one element is a key-hole that fits, and as no such limitation can be inferred, because it expressly appears, by the specification, that Rosner supposed himself to be the first inventor of key-changing tumbler locks in which the rims were loosened from the hubs by a key *in any manner*.

As Rosner did not *intend* to impose a limitation on himself, and as his claim does not *in fact* impose it, the court cannot judicially reissue his patent for him, nor incorporate into it limitations which he has not designed.

The only difference between the Rickards key-hole and the Rosner key-hole is one of degree of close-fitting. This difference in degree of close-fitting of the key-hole, and consequent difference in degree of firmness in holding the rims stationary, is immaterial.

It is clear upon inspection, that there is *no utility* in the Rickards lock of a key-hole which fits the key, to hold the rims stationary, because the rims are *necessarily* held stationary by the tail of the bolt in the gates in the wheels.

The complainant cannot support his patent upon a difference of detail not made a feature of his claim, and of no practical utility if it were one.

Argument of counsel.

Messrs. Edmund Wetmore and George Ticknor Curtis, for appellee :

In the lock described in the Rosner reissue each outer rim has a key-hole in it, this key-hole being formed in a little cam, which when turned by the key, operates the fastening devices. These cams always occupy the same position in the rims, and the key, therefore, performs two duties, viz : first, that of locking and unlocking the fastening devices ; *and, secondly, the duty of holding all the rims at rest*, with their gates coincident, and the rims must be held in this position when the combination of the lock is to be changed.

It is in this *double* function discharged by the key that the novelty of the combination resides.

The prior invention of D. H. Rickards, shown in Exhibit B, is the principal device by which the novelty of the claim has been attacked. The lock of the Exhibit shows a set of wheels, each consisting of an outer rim and a central disk : also a set of fastenings, devices, or bolts, by means of which the rim and disk of each wheel may be secured so as to revolve together, or may be permitted to revolve separately when the fastening device is unlocked : but it has no key-holes through the outer rims of the wheels. The key of the lock, Exhibit B, does not and cannot perform the duty of holding all the rims at rest owing to the absence of key-holes in the rims, and as the key-hole is one of the elements of the combination recited in the first claim of the Rosner patent, the exhibit lock is not the same.

The question whether Rosner *intended* to impose such a limitation upon himself is not before the court. The fact appearing upon the record is that the combination is new, when it includes the key-hole, and that the first claim of the reissue recites the insertion of a key through each or all of the wheels. Plainly, the court below correctly held the patent good and valid, under the rule *ut res magis valeat quam pereat*.

Adams v. Joilet Mnfg. Co., 12 Off. Gaz. 93 ; Stover v. Halstead, 13 Blatch. 95.

Opinion of the court.

The difference in detail upon which the novelty of the claim depends is included in said claim by express terms, and is clearly brought out in the specification.

“The claim must be construed in connection with the entire specification, and in view of the state of the art at the time. The invention is a valuable one, and the patent ought to be so construed as to be sustained, if possible.”

Rogers v. Sargent, 7 Blatch. 507.

Mr. Justice Woods delivered the opinion of the court:

It is conceded that the damages for which the court rendered its decree were allowed for the infringement of the first claim only of the Rosner patent, which, therefore, is alone to be considered upon this appeal.

The invention covered by this claim was described as follows in the specification:

“This invention consists in combining with a set of permutation wheels or tumblers, constructed each of a rim and center, an arrangement of bolts or equivalent devices, which fasten and unfasten said rims and centers by the use of a key inserted through holes in the cams in the wheels, by which said bolts or equivalent devices are operated, the effect being to enable the relative position of the rims and centers to be changed so as to make a new combination, by moving the driving pins to different positions relatively to the slots in the wheels. It further consists in the arrangement of parts as hereinafter described. * * *

“Prior to my invention, in order to change the combination, where a single set of wheels only was used, made up each of a center hub and rim, the wheels had to be removed from the lock and adjusted by hand and then replaced.

“I obviate this difficulty by the following arrangement: opposite the center or hub *q* of each wheel, and located in the outer rim, I place a locking device or bolt, *r*, which, when forced in against the said center or hub, holds the

Opinion of the court.

same firmly in place with the outer rim ; but, when thrown out, disengages said parts and allows the centers to turn free while the rims remain stationary. Against the locking device or bolt *r* rests a cam or eccentric, *s*. Through each or all of these cams, and also through the back plate of the lock, is inserted a key, *P*, fig. 6, by turning which it will be seen that said locking or fastening device may be forced in or drawn out at pleasure. When the key is inserted and the fastening device thrown back, it will be seen that the rims of the wheels are held stationary by the key, while the centers may be turned to any different position by the spindle, thus setting the lock to a new combination. * * *

“The novelty in the first part of my invention consists in the combination of the fastening devices *r* with the wheels, constructed of three parts each, an outer rim and a center or hub composed of two parts, secured together so that by inserting the key the parts composing the wheels may be loosened and the outer rims held stationary, while the centers or hubs are turned to a different position by the action of the spindle, to rearrange the combination, and then the parts locked in place again, and all accomplished without removing the wheels themselves from the lock. In all prior locks with a single set of wheels (each wheel made up of a rim and center hub,) so far as I am aware, the wheels had to be removed from the lock and the combination changed by hand. * * * “What I claim, and desire to secure by letters patent, is:

“1. In a permutation lock, in combination with a set of wheels consisting each of an outer ring or rim and a central disk or hub, a set of fastening devices, or bolts, *r r*, which is made to fasten or unfasten said parts composing the wheels, by the insertion of a key through each or all of the wheels, whereby the combination of the lock may be changed, substantially as herein specified.”

The testimony showed that on the 13th of March, 1852, the D. H. Rickards named in the answer of the defendant,

Opinion of the court.

filed in the Patent Office an application for a patent for an Improvement in Locks, which was either rejected or withdrawn; and that locks made substantially in accordance with the description contained in Rickards' specification were manufactured and sold by Evans & Watson, safe-makers, of Philadelphia, as early as the year 1853. A copy of the application of Rickards is found in the record, and one of the locks made by Evans & Watson in 1853 was produced as an exhibit upon the trial in this court.

A comparison of the specification and model of the plaintiff's patent, with the application of Rickards and the lock made by Evans & Watson, shows that the device of Rickards and the lock of Evans & Watson were an anticipation of the invention covered by the first claim of the plaintiff's patent.

It is clear from the statement in the specification of Rosner's patent that he believed that prior to his invention it was necessary, in order to change the combination in a permutation lock, to remove the wheels from the lock case and adjust them by hand and then replace them.

But Rosner was in error in making this statement. The evidence shows that what Rosner thought had never been done before had been done by means of the device of Rickards, embodied in the lock of Evans & Watson, which is substantially the same contrivance as that covered by the first claim of Rosner's patent.

The Rickards device embraces a set of wheels consisting of an outer rim or hub and a set of fastening devices or bolts, so constructed as to engage and disengage with a set of cogs on the central hub. When the bolts are in place the outer rim and the central hub are firmly fastened together; when withdrawn the hub may be made to revolve without moving the rim. The bolts are withdrawn by means of a key. Each of the wheels has an opening in it for the passage of the key by which the bolts are moved; these openings in the wheels are placed opposite each other and also opposite a key-hole in the lock-case, so that the key may be passed

Opinion of the court.

from the exterior of the lock-case through all the wheels, and thus withdraw the bolts which fasten the rims to the hubs of the wheels, thereby permitting the hubs to be moved and a change to be made in the combination of the lock. When the change is made the key is withdrawn and the bolts are forced back into their places by springs. By this means the combination of the lock is changed without removing the wheels from the lock-case, or even opening the case.

The only difference between the Rosner device and that of Rickards which the plaintiff's counsel have been able to point out is thus stated: in the Rosner contrivance the key, in addition to locking and unlocking the fastening devices, performs, when in the lock, the function of holding the outer rims in place while the combination of the lock is changed by moving the hubs. It is insisted that this key is adapted to perform this office by the fact that it fits snugly the series of holes in the rims of the wheels through which it passes, and thereby prevents any motion of the rims.

The Rickards device has a key-hole in the lock-case which the key neatly fits. But the holes in the rims of the wheels through which the key passes are irregular apertures, not fitted to the shape or size of the key, so that they allow some motion to the rims of the wheels.

We think this difference between the two locks does not give validity to the Rosner patent, for two reasons: first, because the shape and size of the key-hole is not mentioned in the claim of the Rosner patent as one of the elements of the combination. The scope of letters patent must be limited to the invention covered by the claim, and while the claim may be illustrated it cannot be enlarged by language used in other parts of the specification. *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274 [11 Am. & Eng. 364;] *Railroad Co. v. Mellon*, 104 U. S. 112 [13 Am. & Eng. 200.] Secondly, if it were found to be necessary to hold the rims of the wheels rigidly immovable while the combination of

Notes and citations.

the lock was being changed, the idea of changing the irregular aperture in the wheels through which the key in the Rickards device was thrust to one of the shape and size of the key would occur to the rudest and most unskilled mechanic. The suggestion of such a change could not be called invention, and ought not to be dignified by letters patent. *Atlantic Works v. Brady*, 107 U. S. 192 [14 Am. & Eng. 380] and *Slawson v. Grand Street Railroad Co.*, 107 U. S. 649 [14 Am. & Eng. 475;] *Phillips v. Detroit*, 111 U. S. 604 [15 Am. & Eng. 269.]

We are of opinion, therefore, that the first claim of the plaintiff's patent was anticipated by the application and specification of Rickards and by the locks manufactured by Evans & Watson and that it is, therefore, void.

It follows that the decree of the Circuit Court must be reversed and the cause remanded, with directions to dismiss the bill; and it is so ordered.

121 U. S. 25-26.

Patent in suit:

No. 30,092. Rosner, G. September 18, 1860. Reissue 4,488. July 25, 1871. Permutation Lock.

OTHER SUITS ON SAME PATENT:

Greenleaf v. Yale Lock Mnfg. Co., 1879. 17 Blatch. 253; 4 Ban. & Ard. 583; 17 O. G. 625.

Cited:

IN SUPREME COURT IN :

Gardner v. Herz, 1886. 118 U. S. 180; Bk. 30 L. ed. 158.
Clark Pomace Holder Co. v. Ferguson, 1886. 119 U. S. 338; Bk. 30 L. ed. 406.

Notes and citations.

Hendy v. The Golden State & Miners' Iron Works, 1888. 127 U.
S. 370 ; Bk. 32 L. ed. 207.
Hill v. Wooster, 1889. 132 U. S. 693.

IN CIRCUIT COURTS IN :

Consolidated Fruit Jar Co. v. Bellaire Stamping Co., June, 1886.
28 Fed Rep. 91 ; 36 O. G. 121.
United States Bung Mnfg. Co. v. Independent Bung & Bushing
Co., May, 1887. 24 Blatch. 406 ; 31 Fed. Rep. 76.
Cluett v. Claffin, June, 1887. 41 O. G. 1042.

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. pp. 300, 317.
Walker on Pats., 2d ed., 1889. p. 24.

[illegible]

Syllabus.

EDWARD J. CANTRELL AND HENRY B. PETTY,
Trading as CANTRELL & PETTY, APPELLANTS, v.
WASHINGTON WALLICK.*

117 U. S. 689-696. Oct. Term, 1885.

[Bk. 29, L. ed. 1017; 35 O. G. 871.]

Affirming *Ibid*, 12 Fed. Rep. 790.

Argued March 30, 31, 1886. Decided April 12, 1886.

Particular patent infringed. Combination. Novelty. Patentability. Improvement. Estoppel. Prior use, how proven.

1. Letters patent, No. 163,825, granted to W. Wallick, May 25, 1875, for an Improvement in Apparatus for enameling Moldings, sustained as a valid and patentable improvement consisting of a combination; *held*, infringed by defendant's machine, which performs substantially the same function in substantially the same way to obtain the same result, and that in the absence of preponderance of proof, prior use is not made out. (p. 330.)
2. The validity of a claim in a patent is not affected where its separate elements have been anticipated, unless the entire combination of such elements has also been anticipated. (p. 331.)
3. Changes in the construction of an old machine which increase its usefulness are patentable. (p. 331.)
4. A new combination of known devices, whereby the effectiveness of a machine is increased, may be the subject of a patent. (p. 331.)
5. Two patents may both be valid when the second is an improvement on the first, but neither patentee can lawfully use the other's invention without his consent. (p. 331.)
6. While an improvement upon an earlier patent may support a valid claim, and is not inconsistent with such earlier patent, one who infringes both the earlier patent and the improvement upon it is not permitted to set up the earlier patent as an anticipation of the improvement patent. (p. 331.)

*See Explanation of Notes, page III.

Argument of counsel.

7. To make out the defence of prior use and consequent want of novelty, the party setting it up must present not only a preponderance of proof, but proof beyond a reasonable doubt. (p. 332.)

[Citations in the opinion of the court:]

- Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.] p. 331.
Loom Co. v. Higgins, 105 U. S. 580 [14 Am. & Eng. 70.] p. 331.
Hailes v. Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.] p. 331.
Star Salt Caster Co. v. Crossman, 4 Cliff. 568. p. 331.
Machine Co. v. Murphy, 97 U. S. 120 [11 Am. & Eng. 494.] p. 332.
Smith v. Goodyear D. V. Co., 93 U. S. 486 [11 Am. & Eng. 1.] p. 333.
Lehnbeuter v. Holthaus, 105 U. S. 94. p. 333.
Coffin v. Ogden, 18 Wall. 120 [9 Am. & Eng. 425.] p. 333.
Washburn v. Gould, 2 Story, 122. p. 333.

Appeal from the Circuit Court of the United States for the Eastern District of Pennsylvania.

The case is stated by the court.

• *Mr. John Walker Shortlidge, for appellants:*

The defendants have both sworn that they became the owners by purchase of the complainants' apparatus, and found it unfit and inadequate for their work; that they threw it aside as practically worthless, and at great expense obtained the alleged infringement. They also say that the latter machine is adjustable, and competent to enamel moldings of dimensions not exceeding four inches. It will therefore perform all that can be accomplished on the Marcher patents, and much more than all that can be done on the Wallick box, and in a much superior manner. The superior quality of its work as compared with Wallick's device, arises from the more philosophical principles upon which it is designed and constructed. While Wallick's box will only take one or two sizes of the same outline (for as soon as there is a departure from the form with the groove cut in the top, the bar must be removed, and then it is no longer Wallick's device) the respondent's being both movable and adjustable, will take any size of any form in ordinary use.

Argument of counsel.

Again an immense advantage arises from the use of the thin steel side-plates, the elasticity of which enables them to accommodate any defect in quality or unevenness in the wood or grain of the molding, thus imparting to the completed work a higher and finer finish, and requiring less power to force it through, and altogether avoiding the locking or wedging of the molding, by reason of the inflexible or unyielding nature of a solid bar of wood or iron, let into a rabbet or groove cut through the top of the molding, as it is driven through the box.

In view of these results, it could hardly be successfully maintained, that the flexible or elastic side plates, (even had they not been used by Marcher) are the equivalents of the inflexible bar. "A mechanical equivalent as generally understood, is when the one may be adopted instead of the other, by a person skilled in the art." *Johnson v. Root*, 1 Fish. 363; *Eames v. Cook*, 2 Fish. 146; *Parker v. Stiles*, 5 McLean, 63.

The flexible or elastic side plates and the solid bar, so far from being equivalent, and performing the same work in substantially the same manner, act upon directly opposite principles.

It is safe to conclude that the complainant's claim should be reduced to the bar, or piece of wood with sheet iron sides fitted between the end plates simply; and that his specification is too broad, and contains more than is necessary to secure and protect his supposed improvement. Under the ruling in *American Window Screen Co. v. Boughton*, 10 Phila. 262, the complainant's bill must be dismissed. It was decided in the late case of *The Lehigh Valley R. R. Co. v. Mellon*, 104 U. S. 112 [13 Am. & Eng. 200,] that "the scope of letters patent should be limited to the improvement, defined by what is technically known as the claim; and that while the latter may be illustrated it cannot be enlarged by other parts of the specification." It was also said, "that where infringement is alleged it must be proved, it cannot be assumed."

Opinion of the court.

Mr. Charles Howson, for appellee :

As is said by the court below : “The mechanical appliances are virtually undistinguishable, and the mode of operation and the result, identical. Without the expert testimony (which is very positive,) this conclusion is fully sustained by examination of the two boxes and their work.”

If appellants' argument be that appellee's claim is to be construed as limited to the precise construction of central bar shown and described, the answer is that neither the terms of the claim nor the evidence as to the prior state of the art calls for any such limited construction. So far as appears, and unless the proof as to alleged prior use is considered sufficient, appellee was the first to devise and construct an enameling box divided by a slotted partition of *any* construction, into two compartments, and having apertures in the end plates, in a line with the slot in that partition. If this be so appellee is entitled to a liberal application of the doctrine of equivalents in the construction of his claim.

The case is not that of the combination of elements all individually old, but that of a combination introducing a new element, and therewith, a new mode of operation in the art.

The burden of proof as to alleged prior use, is, of course, upon the appellants, and we understand the rule to be that the burden is upon the defendant raising this defence, to establish it by proof *beyond reasonable doubt*, before it can avail him. Walker on Pats., § 76, and cases there cited.

We submit that the court below was clearly right in holding “that the allegation of prior use is not sustained ; that a careful examination of the testimony shows its weight to be against the defendants, while the burden of proof is on them.”

Mr. Justice Woods delivered the opinion of the court :

This was a bill in equity filed by Wallick the appellee to restrain the infringement by Cantrell and Petty, the appel-

Opinion of the court.

lants, of letters patent granted to Wallick, dated May 25th, 1875, for an "improvement in apparatus for enameling moldings," on an application filed October 16th, 1874.

The specification stated the object of the invention to be "a rapid and economical production of enameled moldings." It appears from the record that the moldings referred to are those which, after being enameled, are gilded and used for picture and mirror frames and other like purposes. In order to prepare the molding to receive and retain the gilding it is necessary to enamel the surface to be gilded with a composition made of glue and whiting. Long before the date of the plaintiff's application the method of doing this was by passing the molding through a vessel containing the enameling material, the vessel having at its opposite sides and in the same line apertures of the shape of a section of the molding and large enough to permit the molding to pass through and leave a proper quantity of the enamel to pass out with and adhere to it. As early as October, 1851, a patent had been granted to Robert Marcher for an improvement in machinery for enameling moldings. In Marcher's contrivance the bottom of the box or hopper which contained the enameling composition was left open. The opposite sides of the box were made with apertures of suitable size and shape for receiving the end of the molding; and when the end of the molding was thrust through both the apertures the molding formed the bottom of the box. The result was that on passing a molding through the box its face was enameled, but its back, which did not come in contact with the composition in the box, was not.

The means used to drive the moldings through the box were not covered by this patent; but this was done sometimes by hand and sometimes by passing them between revolving feed rollers. The latter became the more common method. In order to give a good enamel it was necessary to pass the molding through the box several times.

According to the contention of the plaintiff, this was the

W. WALLICK.

Apparatus for Enamelling Moldings.

No. 163,825.

Patented May 25, 1875.

FIG. 8.

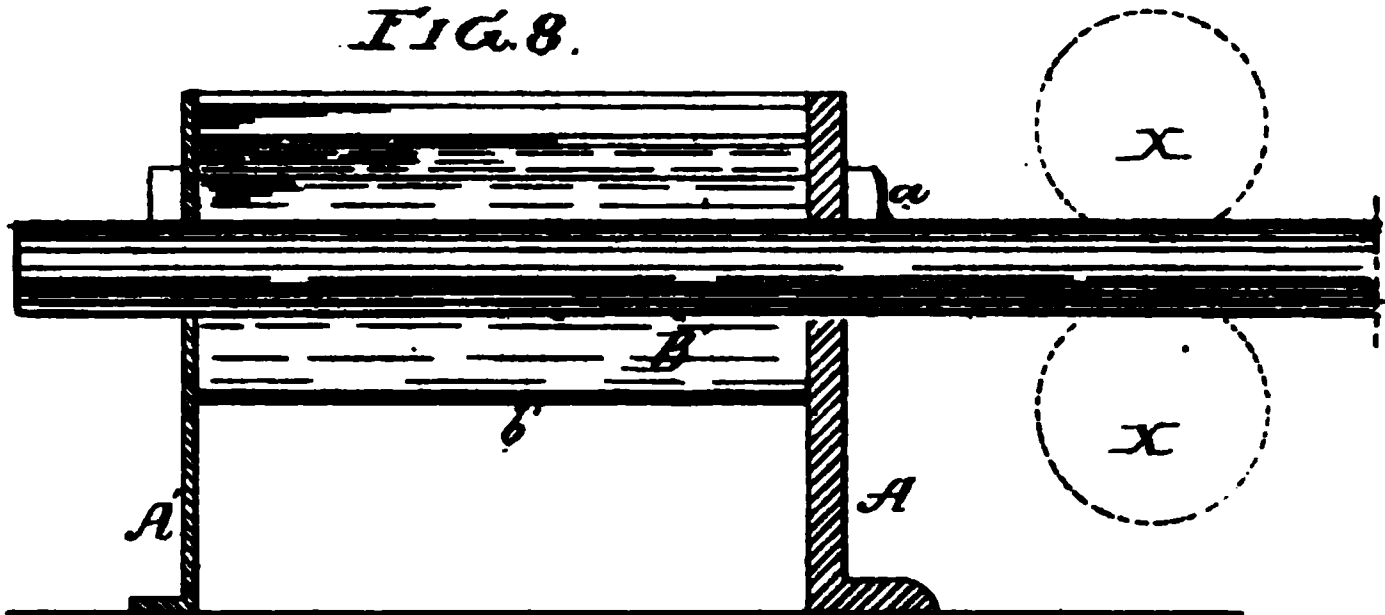


FIG. 9.

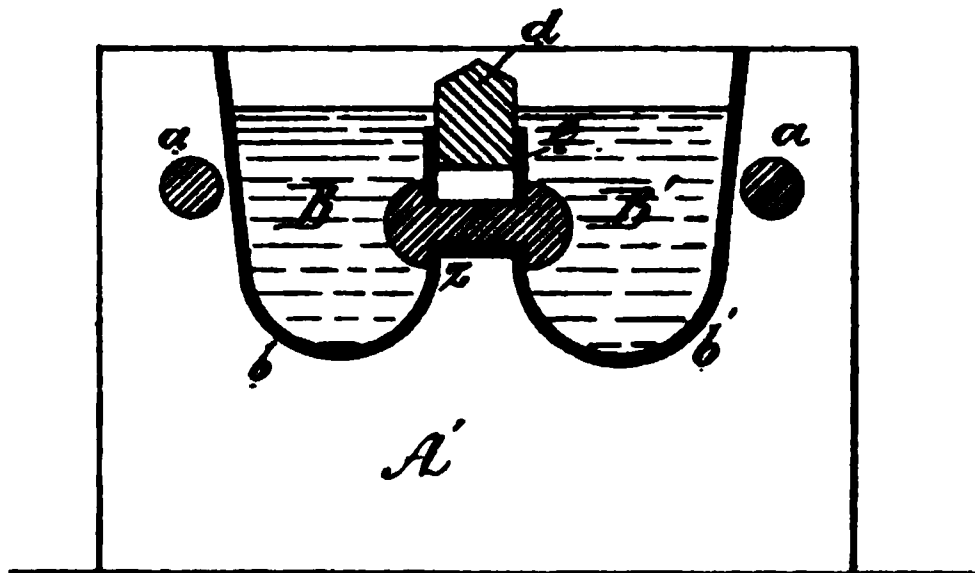


FIG. 1.



FIG. 2.



FIG. 5.



FIG. 7.



FIG. 3.



FIG. 6.



FIG. 4.



Witnesses, Hubert Howson
Thomas M. Sloan

Washington Wallick
by his Atty.
Howson & Sloan

Opinion of the court.

state of the art when he invented the device covered by his patent.

The specification of the plaintiff's patent stated that in enameling certain forms of molding, for instance, the moldings shown in figures 2 and 3 of the drawings, feed rollers could not be used for passing the moldings through the Marcher box without disturbing the coats of enamel on which the upper feed roller must bear. It then proceeded thus :

"The main aim of my invention has been to so construct an enameling box and so form the strips of wood that feed rollers may be employed to pass the strips through the reservoir containing the enameling composition.

"For enameled moldings like Figs. 1 and 2, for instance, I prepare a strip of wood, Figure 5, with a groove, *x*, above for receiving the upper feed-roller, and a groove, *y*, below for receiving the lower feed-roller, and then pass the strip through an enameling box of peculiar construction, so that the rounded edges only are coated ; and when these edges have received the proper number of coats I sever the strip, so as to produce either of the moldings, Figs. 1 and 2.

"For making moldings like Fig. 3 I prepare a strip of the form shown by Fig. 6, so that upper and lower feed rollers may be used to force the strip through the enameling box.

"After the edges of the strip have been properly enameled I sever it in the middle, thereby producing two moldings, like Fig. 3.

"The box by which the enamel is applied to these strips is illustrated in the vertical section, Fig. 8, and tranverse vertical section, Fig. 9, of the accompanying drawing, the box being, in the present instance, arranged for enameling the strip, Fig. 5.

"A and A' are two plates, which are confined by suitable bolts *a a*, two bent plates *b b'*, forming under the circumstances explained hereafter, two reservoirs, B B', for containing the fluid or semi-fluid enameling composition.

Opinion of the court.

The distance between the turned up portion, z , of one plate. b , and that of the other plate is equal to the width of the groove y of the strip, Fig. 5. A permanent longitudinal bar, d , extends from the plate A to the plate A' , and to each side of this bar is secured a plate, e , of metal, the distance across the bar and its two plates being equal to the width of the groove x of the strip, Fig. 5, against the edges of which groove the said plates bear.

“In each of the plates A and A' there is an opening, conforming in shape and dimensions to that of the strip, Fig. 5; and these openings bear such relations to the turned up edges of the plates $b b'$ and to the bar d that the strip, when introduced into the box, will be in the position shown in Fig. 9, so that no parts of the strip, excepting the rounded edges, are exposed to the enameling composition. After thus passing the end of the strip of molding through the openings in the plates $A A'$ the composition may be introduced into the reservoirs $B B'$, for all avenues for the escape of the fluids are cut off by the strip itself.

“Feed rollers $X X$ (shown in dotted lines) may be used for forcing strip after strip through the enameling-box, the said rollers in no way interfering with the different coatings of enamel, because they are never in contact with the enameled surfaces.

“In other words, the enameling-box is separated into two reservoirs, partly by a permanent partition and partly by the strip, which is passed through the box so that the edges only of the strip are exposed to the enameling composition, one edge to the composition in one compartment and the other edge to that in the other compartment.”

The claim was as follows:

“An enameling-box divided into two compartments by a slotted partition, and having openings at the ends in a line with the slot in the partition, all substantially as and for the purpose set forth.”

The defences relied on were that the specification was too

Opinion of the court.

broad, and embraced and appropriated the Marcher box, non-infringement, and prior use by Frederick W. Werner and T. C. Ladd & Co., of Brooklyn.

The first defence is based on the theory that a patent cannot be valid unless it is new in all its elements as well as in the combination, if it is for a combination. But this theory cannot be maintained. If it were sound no patent for an improvement on a known contrivance or process could be valid. And yet the great majority of patents are for improvements in old and well-known devices, or on patented inventions. Changes in the construction of an old machine which increase its usefulness are patentable. *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290.] So a new combination of known devices, whereby the effectiveness of a machine is increased, may be the subject of a patent. *Loom Co. v. Higgins*, 105 U. S. 580 [14 Am. & Eng. 70;] *Hailes v. Van Wormer*, 20 Wall. 353 [9 Am. & Eng. 340.] Two patents may both be valid when the second is an improvement on the first, in which event, if the second includes the first, neither of the two patentees can lawfully use the invention of the other without the other's consent. *Star Salt Caster Co. v. Crossman*, 4 Cliff. 568.

Therefore, letters patent for an improvement on a patented invention cannot be declared void because they include such patented invention. Much less does it lie in the mouth of a party who is infringing both the improvement and the original invention to set up the existence of the first patent as an excuse for infringing the improvement. It is only the patentee of the original invention who has the right to complain of the use made of his invention. We are, therefore, of opinion that the first defence to the suit must fail.

On the question of infringement, a comparison of the model of the plaintiff's patent with the model of the device shown to be in use by the defendants, makes it clear that the defendants have adopted substantially the invention of

Opinion of the court.

the plaintiff. It would baffle the ingenuity of the most skilled expert to show a substantial difference between the invention claimed by the plaintiff and that which it is conceded that the defendants use. It may be true, as contended by the defendants, that the device used by them is in some respects better than that of the plaintiff, but this cannot relieve them from the charge of infringement, if the devices are substantially alike. The rule was well stated by Mr. Justice Clifford, in delivering judgment in the case of *Machine Co. v. Murphy*, 97 U. S. 120 [11 Am. & Eng. 494,] when he said that "In determining the question of infringement, the court or jury are not to judge about similarities or differences by the names of things; but are to look at the machines or their several devices or elements in the light of what they do or what office or function they perform; and to find that one thing is substantially the same as another if it performs substantially the same function in substantially the same way to obtain the same result, always bearing in mind that devices in a patented machine are different in the sense of the patent law when they perform different functions or in a different way, or produce substantially a different result."

Tested by this rule the charge of infringement made against the defendants is clearly made out.

It remains to inquire whether prior use and want of novelty have been shown. The prior use and consequent want of novelty alleged by the defendant was the making, in 1866, and the using (a) from that date until 1871, by Frederick W. Werner, of a box for enameling moldings in which the invention described in the patent of the plaintiff was embodied. Werner testified to this making and use, and to the further fact that, in 1874, he sold the box to Ladd, who some time afterwards began using it.

The burden of proof is upon the defendants to establish this defence. For the grant of letters patent is *prima facie*

117 U. S. 695.

(a) 117 U. S. substitutes "use" for "using"

Notes and citations.

evidence that the patentee is the first inventor of the device described in the letters patent and of its novelty. *Smith v. Goodyear Dental Vulcanite Co.*, 93 U. S. 486 [11 Am. & Eng 1 ;] *Lehnbeuter v. Holthaus*, 105 U. S. 94. Not only is the burden of proof to make good this defence upon the party setting it up, but it has been held that "every reasonable doubt should be resolved against him." *Coffin v. Ogden*, 18 Wall. 120, 124 [9 Am. & Eng. 125 ;] *Washburn v. Gould*, 2 Story, 122, 142.

The proof of prior use in this case depends on the testimony of Werner and T. C. Ladd. The contrivance to which the testimony of these witnesses refers is not produced nor any model of it. It is merely represented in a drawing made by Werner six years after he had sold the box to Ladd.

These two witnesses are contradicted by four others who were engaged in the factory where the box was used, and who had frequently seen the box referred to when in use and the moldings enameled by its use. Their testimony shows that the distinctive element in Wallick's contrivance was not used in the box, but that it was substantially the old Marcher box. The defendants have, therefore, failed to show by preponderance of proof, much less beyond reasonable doubt, the prior use on which they rely. On the contrary the weight of the evidence is against this defence.

Decree affirmed.

117 U. S. 695-696.

Notes :

2. Want of novelty must be addressed to the combination, not to the separate parts :

Le Roy v. Tatham, 14 How. 156 [5 Am. & Eng. 313.]

Gill v. Wells, 22 Wall. 1 [9 Am. & Eng. 471.]

Corn-Planter Patent, 23 Wall. 181 [10 Am. & Eng. 1.]

Fuller v. Yentzer, 94 U. S. 288 [11 Am. & Eng. 138.]

Bates v. Coe, 98 U. S. 31 [12 Am. & Eng. 150.]

Imhaeuser v. Buerk, 101 U. S. 647 [12 Am. & Eng. 443.]

Wicke v. Ostrum, 103 U. S. 461 [13 Am. & Eng. 114.]

Notes and citations.

5. Patentability of an improvement :

O'Reilly *v.* Morse, 15 How. 62 [5 Am. & Eng. 483.]

Fuller *v.* Yentzer, 94 U. S. 299 [11 Am. & Eng. 176.]

Clough *v.* Gilbert & Barker Mnfg. Co., 106 U. S. 166 [14 Am. & Eng. 211.]

Blake *v.* City of San Francisco, 113 U. S. 679 [15 Am. & Eng. 535.]

Improvement gives no title to use device improved upon :

Robertson *v.* Blake, 94 U. S. 728 [11 Am. & Eng. 266.]

Cochrane *v.* Deener, 94 U. S. 780 [11 Am. & Eng. 288.]

Tilghman *v.* Proctor, 102 U. S. 707 [13 Am. & Eng. 29.]

Patent in suit :

No. 163,825. Wallick, W. May 25, 1875. Apparatus for enameling Moldings.

OTHER SUITS ON SAME PATENT :

Wallick *v.* Cantrell, 1882. 12 Fed. Rep. 790 ; 21 O. G. 1878.

Cited :**IN CIRCUIT COURTS IN :**

Hobbie *v.* Smith, May, 1886. 27 Fed. Rep. 656.

Cary *v.* Lovell Mnfg. Co., June, 1887. 31 Fed. Rep. 344.

Hat-Sweat Mnfg. Co. *v.* Davis Sewing Machine Co., October, 1887.
41 O. G. 1273 ; 32 Fed Rep. 401.

Mann's Boudoir Car Co. *v.* Monarch Parlor Sleeping Car Co.,
March, 1888. 34 Fed. Rep. 130.

Notes and citations.

Thompson v. American Bank Note Co., June, 1888. 35 Fed. Rep. 203.

American Bell Tel. Co. v. American Cushman Tel. Co., July, 1888.
35 Fed. Rep. 734.

IN TEXT BOOKS :

2 Abb. Pat. Laws, 1886. pp. 243, 251, 457.

Walker on Pats., 2d ed., 1889. pp. 16, 54, 60, 277.

[illegible]

Syllabus.

UNITED STATES RIFLE AND CARTRIDGE COMPANY AND E. REMINGTON & SONS, APPELLANTS, v. WHITNEY ARMS COMPANY, ELI WHITNEY, President, ET AL. *

118 U. S. 22-25. Oct. Term, 1885.

[Bk. 30, L. ed. 53; 35 O. G. 873.]

Affirming *Ibid*, 14 Blatch. 94.

Argued March 10, 11, 1886. Decided April 19, 1886.

Particular patent. Abandonment. Conclusiveness of Commissioner's decision. Abandonment subsequent to application.

1. Cochran originally filed his application January, 1859, which was rejected in February, 1859, withdrawn in February, 1860, and twenty dollars refunded. Cochran filed a new application for the same invention in 1868, which was rejected by the Commissioner in 1869, upon the ground of abandonment, but upon appeal the decision of the Commissioner was reversed by the Supreme Court of the District of Columbia. On July 7, 1870, the Commissioner again rejected the application, and on December 5, 1870, Cochran renewed his application of 1868 under the act of July 8, 1870, which resulted in the patent in suit. In the interim between the applications of 1859 and of 1868. Cochran obtained numerous patents, sold some of them to advantage, but remained poor and in debt, and still it was evident that his delay did not arise from poverty, but from a small estimate of the value of the particular invention. *Held*, that under these circumstances the invention had been abandoned before the renewed application of 1868, and letters patent granted to John W. Cochran, May 7, 1872, for an Improvement in Breech-loading Firearms, declared invalid. (p. 341.)
2. The decision of the Commissioner upon the question of abandonment is not conclusive, but may be reviewed in a suit for infringement. *Planing Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404] re-affirmed. (p. 343.)

* See Explanation of Notes, page III.

Argument of counsel.

3. An invention may be abandoned as well after rejection or withdrawal of application, as before filing it. Such abandonment may be proved either by express declarations or by conduct inconsistent with any other conclusion. *Planing Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404] re-affirmed. (p. 343.)
4. An inventor whose application has been rejected, and who, without substantial reason or excuse, takes no steps for years to reinstate or renew it, must be held to have acquiesced in the rejection, and to have abandoned any intention of further prosecution. *Planing Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404] re-affirmed. (p. 343.)

[Citation in the opinion of the court:]

Rifle & Cartridge Co. v. Whitney Arms Co., 14 Blatch. 94. p. 342.

Planing Machine Co. v. Keith, 101 U. S. 479 [12 Am. & Eng. 404.] p. 343

Appeal from the Circuit Court of the United States for the District of Connecticut.

The case is stated by the court.

Messrs. J. E. Hindon Hyde and F. H. Betts, for appellants:

The withdrawal of an application for a patent is not necessarily an abandonment of such application, and still less is it an abandonment of the invention itself.

In all the cases, so far as we can find, where an inventor has filed two or more applications for a patent, with greater or less intervals between them, and the question of abandonment of the invention has come before the courts and has been decided adversely to the patentee, there has been a long continued *public use* of the invention for more than two years intermediate the two applications. In some of the cases the first application had not been formally withdrawn, but had been neglected for a long series of years, and a new one filed, or the prosecution of the old one resumed only after many years of public use.

Bevin v. East Hampton Bell Co., 9 Blatch. 50; *Marsh v.*

Argument of counsel.

Sayles, 5 Fish. 610 ; Consolidated Fruit Jar Co. v. Wright, 94 U. S. 92 [11 Am. & Eng. 46 ;] Planing Machine Co. v. Keith, 101 U. S. 484 [12 Am. & Eng. 404 ;] Rich v. Lippincott, 2 Fish. 1 ; Weir v. Morden, 29 Off. Gaz. 83.

In all of these cases the effect of more than two years' public use prior to the last application was considered.

In none of them, nor in any other case, has it ever been held that the withdrawal of one application and the filing of a new one *before* two years' public use had occurred could be construed to be an abandonment of the *invention*.

The first application, *as an application*, might be abandoned, and the patent based solely on the last application, but the mere withdrawal, or even final and absolute abandonment of a former application is not fatal to the patent, if the last application is filed in time.

Nor do the statutes provide that withdrawal or abandonment of an application is an abandonment of an invention. On the contrary it is to be clearly inferred that a valid patent may be granted upon a second application, though a prior one had been in fact abandoned.

The filing of the application is a secret transaction between the inventor and the Patent Office until it is allowed. It remains a secret transaction after the application has been withdrawn. Until allowed and a patent granted upon it, it forms no bar to a patent for the same invention to a subsequent inventor.

Corn-Planter Case, 23 Wall. 181 [10 Am. & Eng. 1.]

Its mere filing unless prosecuted to a final issue, impairs no right of the public or subsequent inventors, and hence its withdrawal confers no rights upon them.

Mere delay in applying for a patent, or in prosecuting an application, is not of itself an abandonment of the invention to the public ; that can only be done in two ways, either 1st. Intentionally, by the inventor expressly dedicating his invention to the public, or by conduct which the law construes to be an expression of such intention, and it is to be remembered that abandonment is not proved by a

Argument of counsel.

mere expression of an intention. *Pitts v. Hall*, 2 Blatch. 237. 2d. By operation of law, which can only be worked in the mode prescribed by statute, viz: by two years public use or sale prior to filing his application.

Neither of these conditions existed in the present case. On the contrary the affidavits on file in the Patent Office on his renewed application of 1868 are pointedly to the fact that Cochran never intended to abandon either his application or invention.

Cochran was wretchedly poor most of the time between the withdrawal of his first application and its renewal in 1868, and if, as was the case, within a reasonable time after coming into the possession of means, he did in fact renew his application, the court will not regard a delay of a few months only as prejudicial to his rights, especially as he was, during a portion of that time absent in Europe on business connected with another invention which had met with merited success.

Mr. Benjamin F. Thurston, for appellee:

The case which in its principle entirely covers the present case, and where the facts very closely resemble the present, is *Planing Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404.]

There the court approved the view of the law that was taken by Mr. Commissioner Fisher in dealing with the present case, upon the proposition that abandonment of the invention was a fact which the court having jurisdiction of the case was entitled to try and determine, and that in determining the question the controlling considerations are the acts and conduct of the patentee exhibiting consistency with the one purpose or the other. It is not necessary that an intent to abandon should be expressed in words or that any formal deed or instrument in writing should contain a statement of such purpose.

Kendall v. Winsor, 21 How. 322 [7 Am. & Eng. 1;] *Shaw v. Cooper*, 7 Pet. 292 [4 Am. & Eng. 286;] *Bevin v. East*

Opinion of the court.

Hampton Co., 9 Blatch. 50 ; Consolidated Fruit Jar Co. v. Wright, 12 Blatch. 149 ; Adams v. Jones, 1 Fish. 527.

Again in the case of Planing Machine Co. v. Keith the court held that there may be an abandonment of an invention after an application has been made for a patent as well as before the application was made.

The court refers to the plain intention of Congress in requiring diligence in the prosecution of claims for letters patent, and states the reasonableness of the conclusion, that after an inventor has been rejected and has taken no steps for many years to prosecute his application, it should be held that he designed to desert it. The opinion is consonant with sound equity, and is in accord with the long line of decisions of this court since January, 1882, upon the subject of the dedication by inventors, to the public, of subjects of claim which might have been made when the original patents were taken, but which the patentees have forborne to claim until after the public have acquired vested rights in the subject.

Mr. Justice GRAY delivered the opinion of the court:

This was a bill in equity for the infringement of letters patent granted May 7, 1872, to John W. Cochran for an improvement in breech-loading firearms, of which one of the plaintiffs was the owner, and the others were the exclusive licensees. The answer denied that Cochran was the original inventor, and alleged that his application, upon which the letters patent were issued, was made and filed in the Patent Office, on May 6, 1868 ; that for more than two years before that date the thing patented had been in public use and on sale with his consent and allowance ; and that long prior to that date the invention had been abandoned by him to the public. A general replication was filed, and evidence taken, by which the material facts appeared to be as follows :

On January 10, 1859, Cochran filed an application for a

Opinion of the court.

patent for this invention, which on February 8, 1859, was rejected by the Commissioner of Patents, for want of novelty ; and on February 20, 1860, was withdrawn by Cochran, and \$20 refunded to him, at his request, agreeably to the Act of July 4, 1836, ch. 357, § 7. 5 Stat. 120.

At various dates from November 19, 1861, to February 11, 1868, eighteen patents were granted to other persons for the same devices or their equivalents, and the defendants bought some of those patents, and afterwards manufactured firearms under them.

On May 6, 1868, Cochran filed a new application, which was rejected by the examiners, on the ground of abandonment. On June 9, 1869, Mr. Commissioner Fisher, on appeal, affirmed their decision. His opinion is published in the Decisions of the Commissioner of Patents for 1869, p. 30. On appeal to the Supreme Court of the District of Columbia, his decision was reversed. On July 7, 1870, he rejected the application. But on December 5, 1870, Cochran filed a formal renewal of his application, under the Act of July 8, 1870, ch. 230, § 35, and on May 7, 1872, the patent sued on was granted to him by Mr. Fisher's successor.

During the time between the applications of 1859 and of 1868, Cochran applied for and obtained twenty-two other patents, nine of them for improvements in breech-loading firearms, some of which he sold for considerable sums. He was poor and in debt ; but upon the whole evidence it is quite clear that his delay in renewing the application of 1859 was not owing to want of means, but to his regarding this patent as of less value than the others.

The Circuit Court was of opinion that the invention had been abandoned before May, 1868, and therefore entered a decree dismissing the bill. 14 Blatch. 94 ; S. C. 2 Ban. & A. 493. From that decree this appeal is taken.

The renewal of Cochran's application on December 5, 1870, was under the provision of the Act of July 8, 1870, ch. 230, § 35, which allowed any inventor whose application for

Opinion of the court.

a patent had been rejected or withdrawn before the passage of that Act to renew it within six months after its passage; and provided that upon the hearing of such renewed application abandonment should be considered as a question of fact. 16 Stat. 202.

The rules of law which must govern this case are clearly established by the judgment of this court in *Planing Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404.] The decision of the Commissioner in favor of the applicant, upon the question whether the invention has been abandoned, is not conclusive, but may be contested and reviewed in a suit brought for the infringement of the patent. There may be an abandonment of an invention to the public, as well after an application has been rejected or withdrawn, as before any application is made. Such abandonment may be proved, either by express declarations of an intention to abandon, or by conduct inconsistent with any other conclusion. An inventor whose application for a patent has been rejected, and who, without substantial reason or excuse, omits for many years to take any step to reinstate or renew it, must be held to have acquiesced in its rejection, and to have abandoned any intention of further prosecuting his claim.

In the case at bar, the first application was both rejected by the Commissioner and withdrawn by the applicant; and the question presented is well put in the opinion of Mr. Commissioner Fisher, above referred to: "Can an inventor withdraw his application, make no effort to renew it for eight years, during which time the subject-matter of the invention has been incorporated into the substance of many other subsequent inventions, and then file a new application and obtain a patent which, to support the novelty of the invention, shall relate back to the first application?" We concur with him and with the Circuit Court in deciding that an inventor cannot do this.

Decree affirmed.

Notes and citations.

Patent in suit:

No. 126,446. Cochran, J. W. May 7, 1872. Breech-loading Firearm.

OTHER SUITS ON SAME PATENT :

United States Rifle & Cartridge Co. v. Whitney Arms Co., 1877.
14 Blatch. 94; 2 Ban. & Ard. 493; 11 O. G. 373.

Cited:

IN TEXT BOOKS :

Walker on Pats., 2d ed., 1889. pp. 69, 70, 71, 72.

Syllabus.

WINFIELD SCOTT KEYES AND ALBERT ARENTS,
PLAINTIFFS IN ERROR, v. JAMES B. GRANT AND
JAMES GRANT.*

118 U. S. 25-37. Oct. Term, 1885.

[Bk. 30, L. ed. 54 ; 35 O. G. 747.]

Argued April 2, 1886. Decided April 19, 1886.

Jury trial. Identity of patent with prior publication. When a question of law and when of fact. Evidence.

1. Where plaintiffs put in evidence their letters patent, No. 121,385, for Smelting-Furnaces, granted November 28, 1871, to Winfield S. Keyes and Albert Arents, and proof of infringement, and the defendants put in evidence certain old publications and illustrations of smelting-furnaces, and testimony that these were anticipations of the patent furnace, and the plaintiffs in rebuttal put in testimony that the furnace of the old publications differed materially from the patent furnace in construction, mode of operation, and result ; and the court instructed the jury to return a verdict for the defendants, which was done, and to this instruction exception was taken and assigned for error, *held*, that this instruction was erroneous, because the identity of the furnaces in the publication with that of the patent was neither manifest as matter of law, nor established so conclusively as matter of fact, that a verdict for the plaintiffs could not be supported. (p. 350.)
2. As matter of law where the differences in construction are obvious upon inspection, and where it is not within judicial knowledge that the differences are immaterial or did not require the exercise of invention, the legal identity of two structures is not manifest.

Where as matter of fact there is evidence that these differences between two structures are material, the case should be submitted to the jury. (p. 365.)

3. Where there is evidence on both sides of an issue, it ought to be submitted to the jury to weigh and consider if the verdict

* See Explanation of Notes, page III.

Argument of counsel.

would not be set aside by the court for want of sufficient evidence. (p. 366.)

[Citation in the opinion of the court:]

Randall v. Baltimore and Ohio R. R. Co., 109 U. S. 478. p. 362.

In error to the Circuit Court of the United States for the District of Colorado.

The case is stated by the court.

Messrs. George Harding, G. G. Symes, and Francis T. Chambers, for plaintiff in error:

The only question at issue being the identity of the thing described in the Karsten publication: the nature, construction, mode of operation, and practicability of the Karsten furnace were proper subject-matter for the evidence of experts, and all such evidence should have been submitted to the jury, together with general instructions as to the rules by which they should consider the evidence.

Bischoff v. Wethered, 9 Wall. 812 [8 Am. & Eng. 213;]
Tucker v. Spaulding, 13 Wall. 453 [8 Am. & Eng. 474.]

The evidence of the witnesses introduced in behalf of the plaintiffs in error was received without objection and was before the jury; this evidence contraverted the sufficiency of the Karsten publication, and the practicability of the Karsten furnace, besides pointing out that the differences between the patented and the Karsten furnace were of such a nature as to necessitate a different mode of operation and prevent the same results being obtained by the two furnaces.

This evidence, if true, proved that the Karsten publication was no anticipation of the patented invention, and to judge of its strength or weakness, truth or falsity, was exclusively the province of the jury.

Hickman v. Jones, 9 Wall. 201; Chandler v. Van Roeder, 24 How. 226; United States v. Tillotson, 12 Wheat. 181; Greenleaf v. Birth, 9 Pet. 299.

(The remainder of the argument was upon the construc-

Argument of counsel.

tion of the patent, and whether it was previously described in Karsten's publication.)

Messrs. Benjamin F. Thurston, E. T. Wells, Thomas Macon, B. T. McNeal, and Whit. M. Grant, for defendants in error :

The court should instruct the jury to return a verdict for either party, when the evidence is of such conclusive character that any other verdict the court would, in the exercise of sound, legal discretion, be compelled to set aside.

Herbert v. Butler, 97 U. S. 319 ; County of Macon v. Shores, 97 U. S. 272 ; Orleans v. Platt, 99 U. S. 676 ; Griggs v. Houston, 104 U. S. 553 ; Heald v. Rice, 104 U. S. 737 [13 Am. & Eng. 460 ;] Insurance Co. v. Doster, 106 U. S. 30 ; Arthur v. Jacoby, 103 U. S. 677 ; Pence v. Langdon, 99 U. S. 578 ; Mont Clair v. Dana, 107 U. S. 162 ; Bank v. Ins. Co., 103 U. S. 783.

A consideration of the record of the case will show not only that the court was justified in directing a verdict for the defendant, but that if the case had been submitted to the jury and a verdict for the plaintiffs rendered, it would have been the duty of the court to have set the same aside, and have ordered a new trial before acquiescing in such finding.

Essentially the preliminary question which the judge was bound to consider was, whether a smelting furnace already known to the art, and described and illustrated in a printed publication long prior in date to the plaintiffs' patent, exhibited the same organization in principle, and involved, or was capable of involving the same method for withdrawing the molten metal. It was also entirely competent for the judge presiding at the trial, in case the prior publication described a furnace, inferior to the furnace described in plaintiffs' patent to exercise his judgment, whether such differences were due only to improvements in mechanical construction involving no difference in principle.

Furthermore, in case the prior publication was not an

Opinion of the court.

exact anticipation of the patent, it might nevertheless be clear that the inventive faculty was not required to be exercised to produce the specific organization of form shown in the plaintiffs' patent. In such cases it would not only be proper, but it would be the duty of the court to incur no risk as to the miscarriage of justice, by submitting questions to be determined by the jury which, by the decisions of this court fall more appropriately within the province of the judge.

Bischoff v. Wethered, 9 Wall. 812 [8 Am. & Eng. 213 ;] *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290 ;] *Powder Co. v. Powder Works*, 98 U. S. 126 [12 Am. & Eng. 201 ;] *Heald v. Rice*, 104 U. S. 749 [13 Am. & Eng. 460.]

(The remainder of the argument was on construction of patent.)

Mr. Justice MATTHEWS delivered the opinion of the court :

This was an action at law to recover damages for an alleged infringement of letters patent, No. 121,385, issued November 28th, 1871, to the plaintiffs for an improvement in furnaces for smelting lead and other ores. There were several defences set up by way of pleas, but the two chiefly relied on were that "the plaintiffs' pretended invention" had been described "in a certain printed publication entitled 'System der Metallurgie,' von Dr. J. B. Karsten, published at Berlin, Prussia, in 1831-2, in 5 volumes, with an atlas of plates, I, at pages 315, 316, 317, 318, 319, 320, 321, and 322, of Volume III, and pages 150 to 166, both inclusive, and 166 to 180, both inclusive, of Volume V, and figures 479, 480, 481, 482, 483, 484, 473, 474, 475 on plate XXI, and figures 850 to 868, both inclusive, of plate XLI of the atlas accompanying said work ;" and secondly, that, in view of the state of the art at the date of the alleged invention, the improvement was not patentable as not requiring the exercise of invention.

The issues came on for trial before a jury, and there was

Opinion of the court.

a verdict for the defendants and judgment thereon, to reverse which this writ of error is brought.

It appears from the bill of exceptions that the plaintiffs read in evidence the patent sued on, the substantial part of the specifications attached to which was as follows :

“The object of this invention is to provide a novel, simple, and improved method of tapping or withdrawing lead and other metals, when in a molten state, from the bottom of a smelting-furnace, so that the metal may be obtained therefrom in a clean state, and also that the formation of hard matters or incrustations on the sides and bottom of the furnace may be avoided. The nature of this invention consists in the use or employment of a basin of suitable dimensions, located a short distance from one side of the furnace and at a suitable elevation above the bottom of the furnace ; which said basin is connected with the furnace by means of a tube which extends from the bottom of the basin to the bottom of the furnace. As the molten metal fills the lower part of the furnace it rises to the same level in the tube until it reaches the basin, from whence it may be removed as clean metal.

“To enable others skilled in the art to make and use our invention, we will proceed more particularly to describe the same.

“The figure represents a sectional elevation of a portion of a smelting-furnace with our improvements.

“A represents the furnace which may be of ordinary or common construction. B is a basin of suitable dimensions, located at the top of an extension built on one side of the furnace and at a suitable elevation above the bottom of the furnace. The basin may be constructed of any material suitable for receiving and holding the molten metal. Extending from the bottom of the basin B, to the bottom of the furnace A, through the above-mentioned extension, is a tube C, which connects the basin with the furnace, and which may be made of iron, clay, or other material suitable for the purpose.

KEYES & ARENTS.

Smelting Furnace.

No. 121,385.

Patented Nov. 28, 1871.

Witnesses:
John L. Thompson
A. Barnes

Inventors.
Winfield Scott Keyes
Alfred Arents
By their Attorneys.
Wilton Company.

Opinion of the court.

“The metal as it melts falls to the bottom of the furnace ; as the surface of the molten metal rises within the furnace it rises to the same level in the tube C until it reaches the basin B, from which it may be removed with a ladle.

“The advantages of this invention are obvious, as by this means the metal is tapped or withdrawn from the furnace free from impurities ; and it will also be seen that the difficulties arising from the formation of hard matter or incrustations on the bottom or sides of the furnace, occasioned by the usual method of drawing off a large quantity of molten metal at one time, are obviated.

“Having thus described our invention, what we claim as new, and desire to secure by letters patent of the United States, is—

“The method of tapping or withdrawing molten lead or other metals from a smelting-furnace by means of the basin B and tube or connection C, in combination with the furnace substantially as shown and described.”

The drawing referred to is as follows :

Albert Arents, one of the plaintiffs, testified to his own qualifications as an expert in the art of smelting, and also “that the obtaining of clean metal from the side of a furnace of ordinary construction automatically by the means described in the specifications in the patent was novel and useful, and a great improvement over the old method of withdrawing clean metal from smelting-furnaces ; that the specifications were sufficiently full, clear, and precise to enable persons skilled in the art to which they appertained, to wit, the art of smelting, to construct a furnace which would produce the useful result claimed by the patent, to wit, the obtaining clean metal automatically from a smelting-furnace when in operation of ordinary construction ; that a furnace of ordinary construction, as it existed at the date of plaintiff’s patent, as defined by the art of smelting, so far as is material to this case, consisted of an inner hearth with an open breast or sump, into which the molten masses

Opinion of the court.

of the furnace, when fused, collected and settled, according to their specific gravities; that the front of a smelting-furnace was that part of the furnace where the slag ran and was handled by the smelter; that the back of the furnace was opposite to the front, and that those parts of the furnace to the right and left were known and called the sides; that the slag ran off through a spout over the open breast of the furnace in front, and the clean metal was tapped periodically from a taphole at the bottom of and from the side of the furnace; that each part in the construction of the furnace had its particular functions, which were important, as understood and known and taught in the art of smelting at that time, to wit, the front was the working door of the furnace, and was where the slag ran off and was handled; the back and sides where the tuyeres were situated, through which the blast was forced into the furnace, and the clean metal was periodically drawn or tapped from one side or other of the furnace."

The plaintiff then introduced a model on the scale of one inch to the foot, in sections, showing what a furnace of ordinary construction was at the date of the patent, as known in the art of smelting, showing the improvement of the plaintiffs and the old mode of tapping, of which the following are drawings:

A—Section of furnace of ordinary construction in 1871, showing plaintiff's device.

B—Basin similar to that shown in plaintiff's patent.

C—Tube connecting bottom of basin with bottom of furnace.

D—Section of same furnace.

E—Basin to receive clean metal when furnace was tapped.

F—Tap hole through which clean metal was periodically tapped by the old method into basin E.

G—Section of same furnace.

H—Inner hearth.

I—Fore hearth or sump.

Drawing from Plaintiff's Model.

Opinion of the court.

K.—Slag spout or exit.

L.—Tuyere holes.

The plaintiffs then corroborated this testimony of Arents, by that of numerous experts, and gave evidence tending to prove infringement by the defendants, and rested their case.

The defendants put in evidence certain extracts from the text and illustrative drawings of smelting-furnaces of the treatise upon Metallurgy by Dr. J. B. Karsten, published at Berlin in 1831-32, mentioned in the plea, translated as follows :

“(318) The fore-hearth is that part of the crucible projecting in front of the fire-walls of the furnace.

“Crucible-furnaces are those shaft-furnaces in which the crucible is entirely on the inside. They are divided into eye-crucible furnaces and tap-crucible furnaces. The former have an eye in the front wall from which the slag flows continuously, the metal and matte being tapped off at intervals into basins.

“The tap-crucible furnaces are those in which the metal, matte, and slag are all tapped off from time to time.

“Sump-furnaces are those shaft-furnaces in which the crucible is partly in the furnace and partly in front of the furnace. The slag runs off continuously over the fore-hearth. The metal and matte are tapped off into receiving vessels or tap-basins. Sometimes the sump-furnaces are not provided with tap-basins, and the metal in them is dipped with ladles direct from the fore-hearth.

“Spur or channel furnaces are shaft-furnaces without a crucible. The molten contents flow through the eye directly from the furnace-hearth into receiving vessels. These different furnaces can be more advantageously studied from the drawings than from written descriptions.

“(319) In some countries the crucible-furnace is preferred ; in others, the sump-furnace. It is not advisable to use the channel-furnace when clean metal is produced. With this furnace the metal is not protected from oxida-

Opinion of the court.

tion. It is used chiefly in smelting copper ores, with a view to producing copper matte.

“The drawings, figures 461 to 463, represent an eye-crucible furnace. The slag runs continuously through a hole in the front wall. The metal and matte are tapped off at intervals through a hole in the side of the crucible.

“The drawings, figures 464 to 466, represent an eye-crucible furnace, which differs from the former, in that the tap-hole is in the front wall and at the bottom of the crucible.

“The drawings, figures 467 to 469, represent a tap-crucible furnace. The metal, matte, and slag are tapped off from time to time into receiving-basins.

“The drawings, figures 470 to 472, represent an eye-crucible similar to the one represented by drawings, figures 464 to 466; it is provided with two tap-basins. The slag also passes through a basin, for the purpose of allowing the small particles of metal and matte mixed with it to settle.

“(320) The drawings, figures 473 to 475, represent a sump-furnace, with a covered eye, in which the brasque (a mixture of fire-clay and coke-dust) under the front wall divides the sump into two communicating vessels.

“The slag runs off continuously through the eye between the bottom of the front wall and the top of the brasque partition.

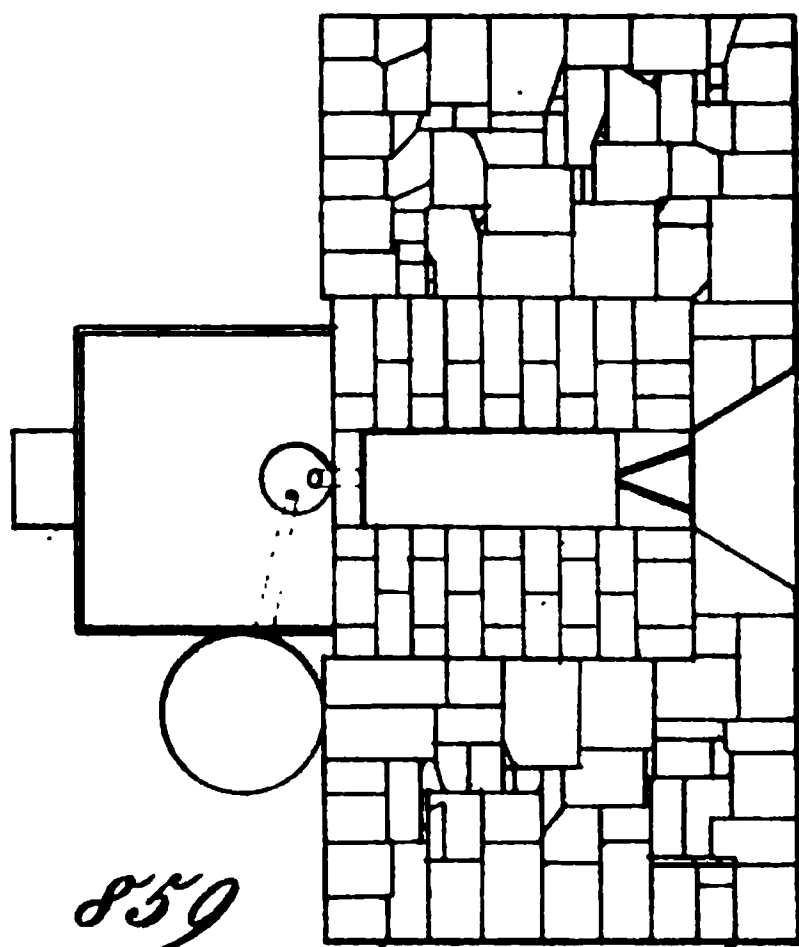
“This arrangement is used when it is desired to dip the clean metal with ladles from the fore-hearth, instead of drawing it off into tap-basins.

“The drawings, figures 476 to 478, represent a sump-furnace with an entirely open breast, in which the slag passes off immediately over the fore-hearth.

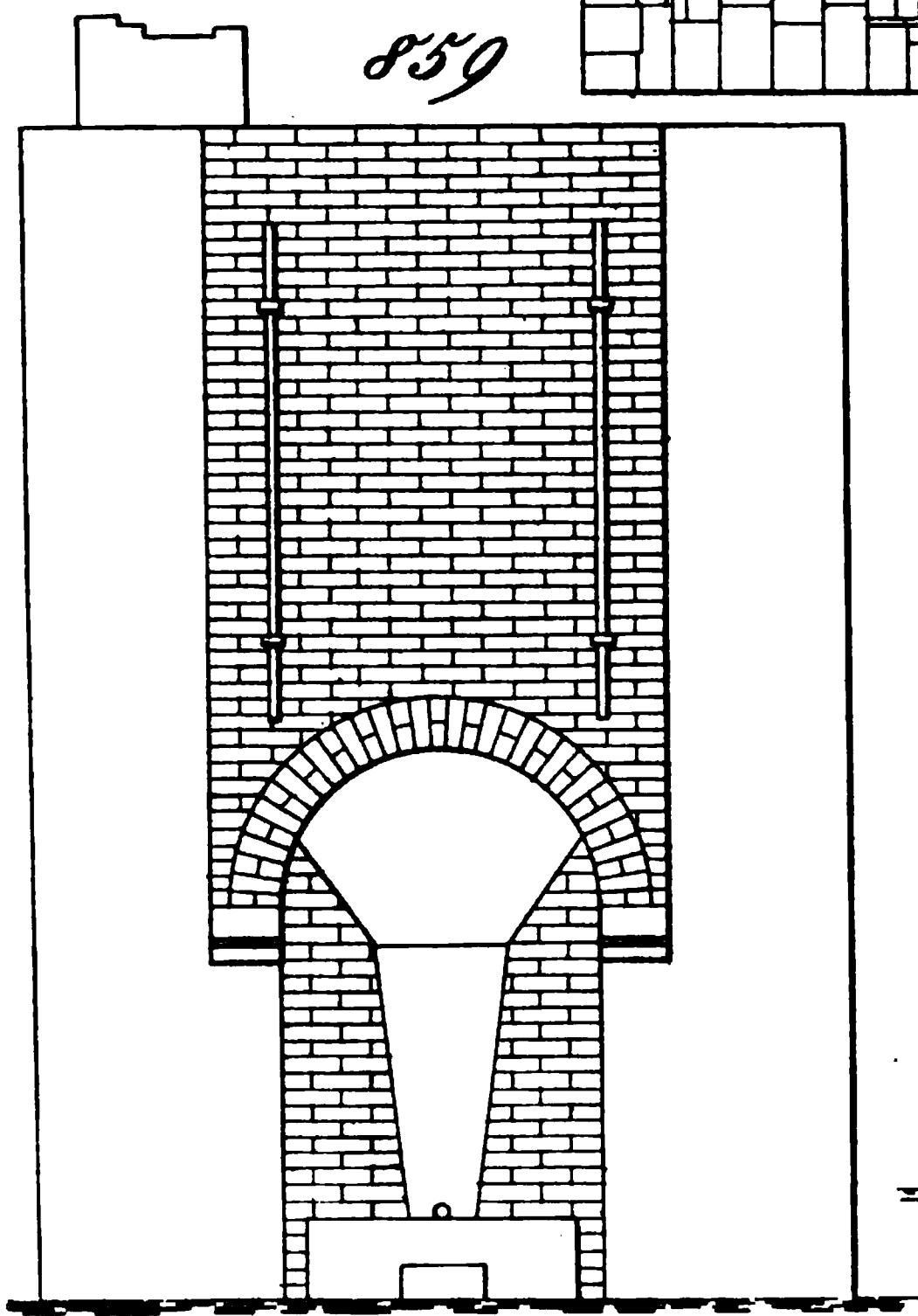
“The drawings, figures 479 and 480, represent a sump-furnace with a covered eye, and with a tap-basin, into which the metal and matte are tapped from the fore-hearth. This furnace might be regarded as a channel-furnace, by simply considering the short canal, or eye, which connects the sump

Karsten's Atlas. Plate XLI.

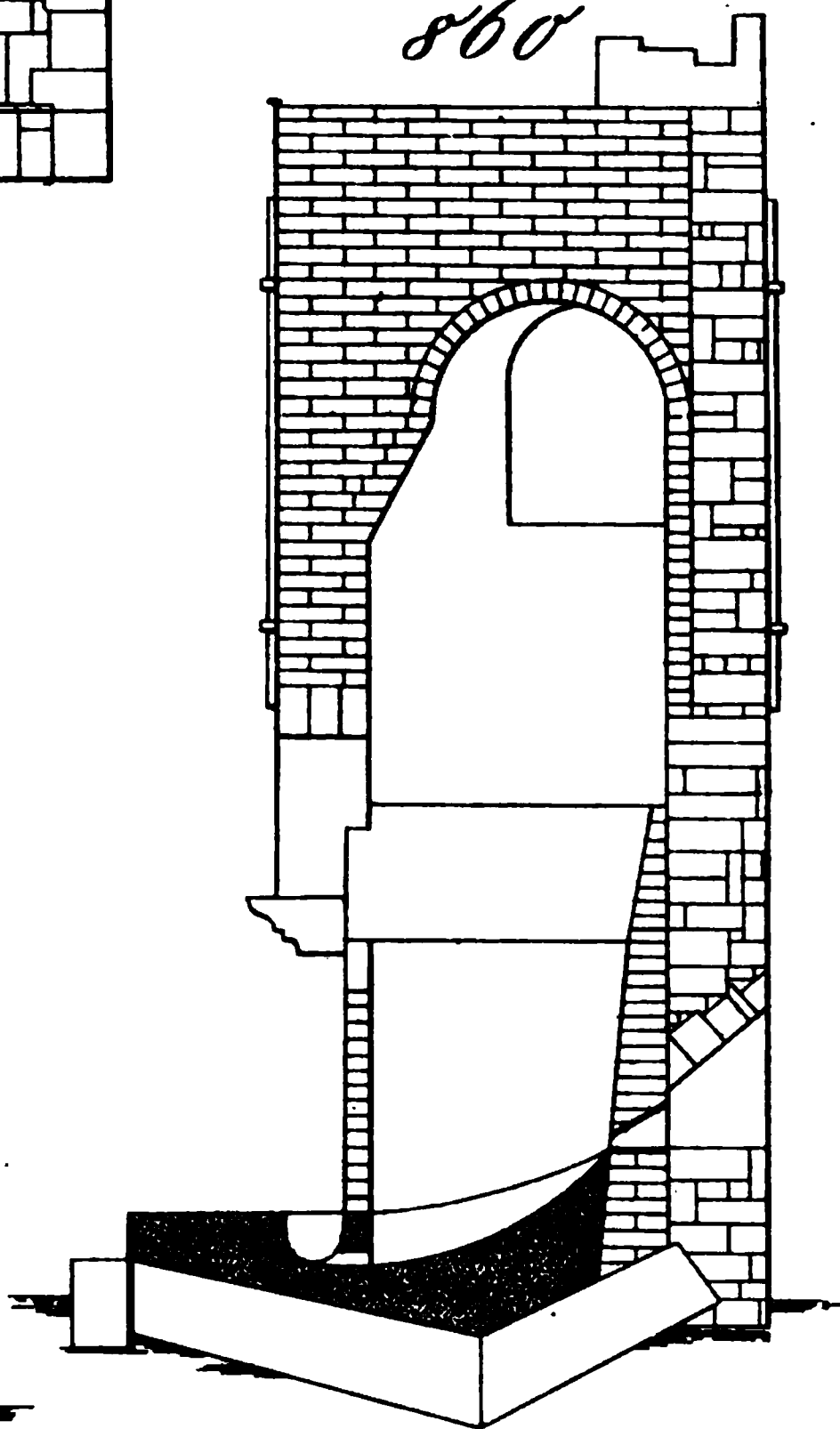
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Opinion of the court.

under the shaft with the fore-hearth, as a channel. But, by means of this short canal or eye, the sump and the fore-hearth stand in combination with each other as a pair of communicating tubes or vessels ; consequently, it is a sump and not a channel-furnace. The slag may pass through the covered eye into the fore-hearth, or through an open eye above the fore-hearth, the latter eye being used exclusively for the slag.

“In smelting operations, where little or no slag is produced, the upper eye is dispensed with entirely.”

The following are figures 858–860 and their scale from Plate XLI of Karsten’s Atlas :

The defendants also introduced experts as witnesses, whose testimony tended to prove that, as stated by one of them :

“The furnaces thus figured by Karsten are planned for withdrawing the reduced metal continuously, and as fast as possible, from the oxidizing action of the blast and the intensely heated part of the slag. So the metal is made to flow constantly outward and upward through the open eye into the fore-hearth, which is made as high as the inner crucible ; and generally, the clean molten metal alone is passing through this bottom eye. When much slag is formed it is run off separately by another eye placed higher up ; when very little slag is produced, it accumulates for a long time on the top of the molten metal in the inner crucible, and the clean metal in the fore-bay may be partially removed many times without allowing any of the slag to escape through the eye.”

One of the defendants, James Grant, was called to prove that he had constructed an experimental furnace of small size, according to the description and drawing of figure 860 of Karsten’s publication, and worked it successfully. A model was exhibited, the proportions and features of which are shown in the following drawings :

A—Horizontal section.

Opinion of the court.

B—Fore-hearth.

C—Open eye.

E—Slag-exit made by defendants, with spout over fore-hearth.

F—Front section.

G—Open eye.

H—Slag-exit made by defendants.

I—Vertical section.

K—Fore-hearth.

L—Hidden eye.

M—Open eye.

N—Tuyeres.

And his testimony was supported by that of others who had seen the furnace in operation.

On the other hand the plaintiffs, in rebuttal, called expert witnesses, who testified that the plaintiffs' furnace, as described in the patent, differed materially from that described by Karsten and from the model of the one made by the defendant Grant, and who pointed out in their evidence the particulars in which that difference consisted, in the construction and arrangement of the furnace, in the principle of its operation and in the results produced.

All of the evidence on both sides having been given, the whole of which is set out in the bill of exceptions, the court, having refused to charge the jury as requested by the plaintiffs, instructed the jury to return a verdict for the defendants, which was done; and to this ruling exception was duly taken, and is now assigned for error.

The judgment entered on the verdict rendered in favor of the defendants, in pursuance of the direction of the court, can be maintained only on the ground, either that the legal identity of the furnace described by Karsten with that covered by the plaintiffs' patent was manifest as a matter of law, or that it was established as a matter of fact so conclusively by the evidence that a verdict the other way could not be supported, within the rule as stated in *Randall v. Baltimore & Ohio R. R. Co.*, 109 U. S. 478.

Drawing from Defendant's Model.

Opinion of the court.

Clearly it was not matter of law that the specification of the plaintiffs' patent, and the publication of Karsten, taken in connection with the drawings intended in illustration, described the same thing. The differences were obvious in the arrangement of the parts, and the relation of the basin in one, and the fore-hearth in the other, to the interior of the furnace, and the mode of connecting the one with the other for the purpose of drawing the metal from the furnace. So that it certainly was not a matter of mere judicial knowledge that these differences were either not material in any degree to the result or, if material at all, were only such as would not require the exercise of the faculty of invention but would be suggested by the skill of an experienced workman employed to produce the best result in the application of the well-known arrangements of the furnace. It was claimed, on behalf of the plaintiffs, that the furnace described in the patent and as used by them, embodied an idea not contained in or suggested by Karsten's publication. That idea consisted in the employment of a basin to receive the molten metal, located at a suitable elevation above the bottom of the furnace, and connected with the interior of the furnace by means of a tube, so that, instead of tapping a lead smelting-furnace by withdrawing the molten metal through a tap-hole near the bottom, it was proposed to allow the metal to flow upward into the receiving basin under the operation of the familiar natural law that liquids will seek the same level in communicating vessels. The object to be attained by this arrangement was that clean metal, unaccompanied with slag or other impure products resulting from the operation of smelting lead ores, should, after settling to the bottom of the furnace, by reason of its greater specific gravity, ascend through the connecting tube, as the mass of molten metal accumulates and rises within the furnace, into the receiving-basin, and be dipped thence with a ladle. It was insisted by the patentees that no such arrangement and combination were

Notes and citations.

to be found in Karsten's publication or in the furnaces depicted in his figures, and that the improvement which they constituted was not the result of mere mechanical skill, but sprung from a genuine effort of invention. And this view was supported by the opinion of many experts skilled in the art.

In our opinion this was a question of fact properly to be left for determination to the jury, under suitable instructions from the court upon the rules of law, which should guide them to their verdict. And there was evidence upon both sides of the issue sufficient to require that it should be weighed and considered by the jury in the determination of the question ; and this implies that, if it had been submitted to the jury and the verdict had been for the plaintiffs, it would not have been the duty of the court to have set it aside as not supported by sufficient evidence. The court erred, we think, in withdrawing the case from the jury as it did by directing a verdict for the defendants.

For this error the judgment is reversed, and the cause remanded, with directions to grant a new trial ; and it is so ordered.

118 U. S. 37.

Notes :

1. The court cannot instruct the jury that evidence of the fact disputed, proves it :

Burdell v. Denig, 92 U. S. 716 [10 Am. & Eng. 420 ;] and
see

Bischoff v. Wethered, 9 Wall. 812 [8 Am. & Eng. 213.]

Patent in suit :

No. 121,385. Keyes & Arents. November 28, 1871. Smelting-Furnace.

Oct., 1885.]

KEYES v. GRANT.

367

Notes and citations.

Cited :

IN TEXT BOOKS :

Walker on Pats., 2d ed., 1889. p. 397.

[illegible]

Syllabus.

WILLIAM GARDNER ET AL., APPELLANTS, v.
MARTIN HERZ ET AL.*

118 U. S. 180-193. Oct. Term, 1885.

[Bk. 30, L. ed. 158: 35 O. G. 999.]

Affirming *Ibid*, 20 Blatch. 538.

Argued April 19, 1886. Decided May 10, 1886.

Particular patent. Absence of invention. New use. Defences to infringement. "New" R. S. sec. 4886.

1. Claim 2 of reissued letters patent, No. 9,094, G. Gardner, February 24, 1880, (original No. 127,045, May 21, 1872,) Chair Seat for "A chair seat made of laminæ of wood glued together with the grains in one layer crossing those of the next, concave on the upper surface, convex on the lower surface and perforated, as a new article of manufacture substantially, &c." construed and *held*, in view of the fact that the mode of construction of the article claimed, the material employed, the form after construction, and the purpose for which it was to be used had been described separately in earlier patents, although the article itself had never been described in any single patent, and to that extent was novel and was of great utility, that it did not require invention to produce it.

The statement of a new use that the chair seat was an independent article, formed and shaped as described, not found in the original patent, but imported into the reissue obtained after unreasonable delay, *held*, not to confer validity to the claim whose patentability rested upon such new use. (p. 381.)

2. Defences of suits for infringement are not limited to those enumerated in section 4920, Revised Statutes, but embrace all violations of statute in the granting of a patent, such violations raising questions of law, the decision of the Commissioner upon them is not binding upon the courts. (p. 384.)
3. The word "new" in section 4886, Revised Statutes, means new to the extent of requiring the exercise of the inventive faculty. (p. 384.)

*See Explanation of Notes, page III.

Argument of counsel.

[Citations in the opinion of the court :]

Mahn *v.* Harwood, 112 U. S. 354 [15 Am. & Eng. 322.] p. 384.

Thompson *v.* Boisselier, 114 U. S. 1 [15 Am. & Eng. 549.] p. 384.

Yale Lock Mfg. Co. *v.* Greenleaf, 117 U. S. 554 [p. 303 *ante.*] p. 385.

Saxby *v.* Gloucester Waggon Co., 7 Q. B. Div. 305. p. 386.

Penn. R. R. Co. *v.* Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148.] p. 387.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The case is stated by the court.

Mr. Edward N. Dickerson, for appellants :

As soon as the invention was made its value was at once recognized by the trade, and it went into rapid and enormous use, because, it is the cheapest seat and the strongest and most durable ; it is the only seat that can be applied to different chair-seat frames ; it is the only seat capable of being sold separate from chair-seat frames ; it is the only seat that can be applied to chair-seat frames by unskilled labor.

The principles of law which govern the new application of an old material to an old use, are well enough settled ; although there has been some confusion in the decisions, arising from a very singular misapprehension of the case of *Hotchkiss v. Greenwood*, 11 How. 248 [5 Am. & Eng. 240,] which has been often supposed to have decided that it was not patentable to substitute porcelain as a door knob for metal or wood. That case decided no such thing. On the contrary it admitted the patentability of such a substitution, which was a very valuable invention. The point decided was that it was not patentable to fasten the shank into a knob made of porcelain by the same means and in the same manner that had been used in fastening the shank into metal or wooden knobs ; and the court below submitted it to the jury whether there was any difference in the two methods of fastening the shank to the knob.

Smith v. Goodyear, 93 U. S. 496 [11 Am. & Eng. 1,] states the law correctly ; which is that where a decidedly im-

Argument of counsel.

proved result follows from the substitution of one material for another, that constitutes patentability. See also, *Hicks v. Kelsey*, 18 Wall. 670 [9 Am. & Eng. 150.]

The court erred in deciding that the new article of manufacture, specified and claimed in the present reissue, which is possessed of great practical value and utility, is not patentable, in view of a number of other attempts to make a valuable and useful chair seat which have failed, *some* of which contained *some* of the elements contained in the patented chair seat, *but none of which contained them all*.

Mr. James P. Foster, for appellees :

On the question of the patentability of the complainants' structure, cited :

Aggregation of old elements—no new product—unpatentable.

Wilson Packing Co. v. Chicago Pack. & Prov. Co., 105 U. S. 566 [14 Am. & Eng. 49 ;] *Thatcher Heating Co. v. Burtis*, 12 Fed. Rep. 569; *Reckendorfer v. Faber*, 92 U. S. 357 [10 Am. & Eng. 373.] See 12 Fed. Rep. 727; *Hayes v. Seton*, 12 Fed. Rep. 120 ; *The Packing Co. Cases*, 13 Fed. Rep. 304, decided May 8, 1882; *Perfection Window Cleaner Co. v. Bosley*, 2 Fed. Rep. 574 ; *Sawyer v. Bixby*, 9 Blatch. 361 ; *Double Pointed Tack Co. v. Two Rivers Mnfg. Co.*, 3 Fed. Rep. 26 ; *Williams v. Rome, W. & O. R. R. Co.*, 15 Blatch. 200 ; *Hailes v. Van Wormer*, 5 Off. Gaz. 89 [9 Am. & Eng. 340.]

Elements must co-operate.

Doubleday v. Roess, 11 Fed. Rep. 737 ; *Pickering v. McCullough*, 21 Off. Gaz. 75 [13 Am. & Eng. 238.]

Old material and form. No new functions.

Wallace v. Noyes, 13 Fed. Rep. 172.

No novelty where process is a single one, and there is no succession.

Wallace v. Noyes, 13 Fed. Rep. 180.

“No combined patentable result.”

Perry v. Co-op. Foundry Co., 12 Fed. Rep. 436.

Piece of India rubber with a hole in it. No one could lack skill to make the hole.

Argument of counsel.

Rubber Tip Pencil Co. v. Howard, 9 Blatch. 490.

Hole for light in fare box. Anyone could make it.

Slawson v. Grand St. P. P. & F. R. R. Co., 4 Fed. Rep. 531.

Air spaces and nail holes in corrugated iron. No invention to make larger or different shape. Might work well, but anyone could make it.

Belt v. Crittenden, 2 Fed. Rep. 82.

Change caused simply by difference in material.

Albright v. Celluloid Harness Tr. Co., 12 Off. Gaz. 227.

Reduction of size of old device for new use is no invention.

Double Pointed Tack Co. v. Two Rivers Mnfg. Co., 3 Fed. Rep. 31.

“Substantially same article.”

Griffiths v. Holmes, 8 Fed. Rep. 154; Kerosene Lamp Heater Co. v. Little, 3 Ban. & Ard. 312; Dunbar v. Albert Field Tack Co., 4 Fed. Rep. 543.

“Mechanical skill is one thing; invention is another thing. Perfection of workmanship, however much it may increase the convenience, extend the use, or diminish expense, is not patentable.”

Reckendorfer v. Faber, *supra*.

“Ordinary mechanical adaptation, nothing ‘more,’ is not patentable.”

Mahn v. Harwood, 3 Ban. & Ard. 515.

Used flesh instead of grain side of leather. No invention.

Brummitt v. Howard, 3 Fed. Rep. 801.

Sheet metal instead of *papier-maché*, no invention.

Ingersoll v. Turner, 12 Off. Gaz. 189.

Need not be practically useful apart from other known instrumentalities. Test is not “whether in present state of the art his (patentee’s) invention (without improvement) would be deemed of any value, or be salable for use.”

Wheeler v. Clipper Mower & Reaper Co., 10 Blatch. 181.

Failure to attract attention is no proof invention is not complete and valuable.

Opinion of the court.

Crandall v. Richardson, 8 Fed. Rep. 808.

Great sales, no proof of invention.

Crandall v. Richardson, *supra*.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity, brought in the Circuit Court of the United States for the Southern District of New York, by William Gardner, Oliver L. Gardner and Jane E. Gardner against Martin Herz and John K. Mayo, for the infringement of reissued letters patent, No. 9,094, granted to the plaintiffs, February 24th, 1880, for an improvement in chair-seats, (the original patent, No. 127,045, having been granted to George Gardner and Gardner & Gardner, as assignees of George Gardner, as inventor, May 21st, 1872, and having been reissued as No. 7,203, to George Gardner, William Gardner, and Jane E. Gardner, July 4th, 1876.) The application for the first reissue was filed April 8th, 1876, and that for the second, October 31st, 1879. The drawings annexed to the original patent and each of the reissues were substantially the same. Those of the second reissue were as follows:

The specification and claim of the original patent were in these words:

“Figure 1 is a plan view, partly in section, the section showing the middle layer of veneer. Fig. 2 is a longitudinal section, taken on the line *xx* of Fig. 1. Similar letters of reference refer to like parts in both of the figures.

This invention relates to chair-seats; and it consists in constructing a seat out of veneers of wood, with the grain running across each other and glued together.

I have shown, in the drawing accompanying this specification, three layers of veneers, they being represented by the letters A B C. The grain of veneer A crosses that of veneer B, as shown in section in Fig. 1, and the grain of veneer B crosses that of veneer C, as seen in Fig. 2. Ve-

G. GARDNER,
Assignor, by name assignment, to O. L. W., & J. E. GARDNER.
Chair-Seat.

No. 9,094.

Reissued Feb. 24, 1880.

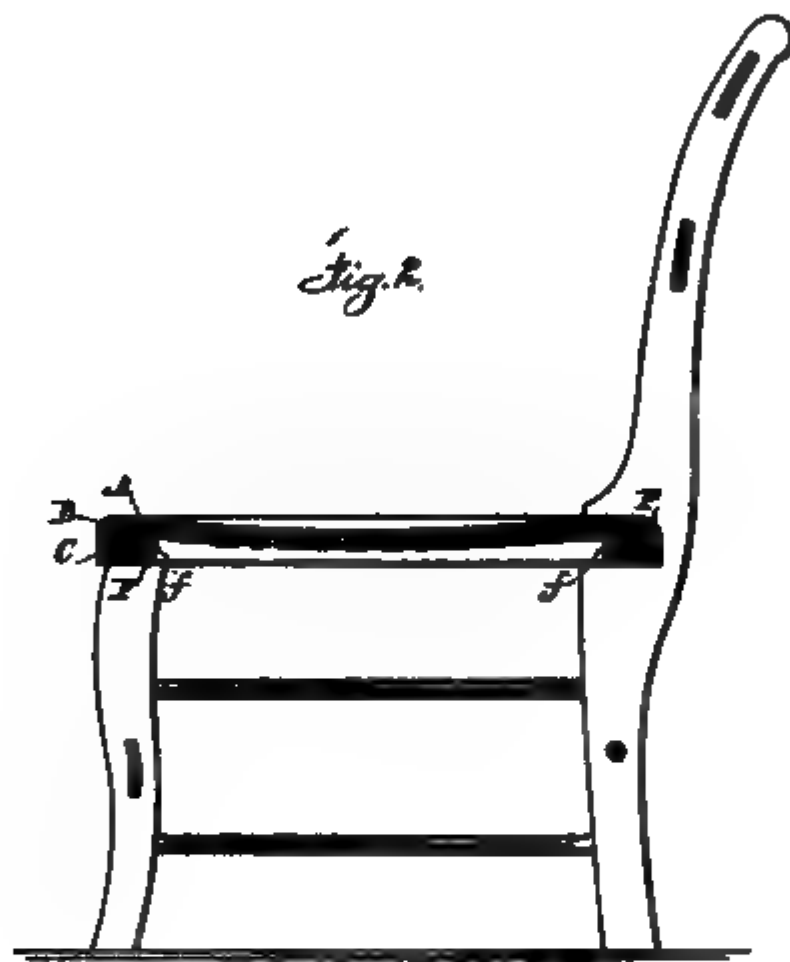


Fig. 1.

Witnesses
Chas. H. Smith,
Geo. J. Pinckney

Witness
George Gardner
Lemuel W. Lorrill
Atty.

Opinion of the court.

neers when thus arranged, that is to say, with the grain running in diverse directions, will make a seat which, for economy and durability, will be found to be a very useful improvement. The seats may be left solid, or perforated after some design agreeable to the fancy of the one having them made. A slightly concave configuration may be given to the seat, as shown in Fig. 2.

Seats thus made do not cost as much as those that are made of cane, and are better by far in point of durability.

The veneers rest upon a shoulder, *f*, of a frame, *F*. which surrounds them.

Having thus described my invention, what I claim and desire to secure by letters patent is :

As a new article of manufacture, a chair seat constructed of veneers of wood with the grain running crosswise of each other and glued together, all substantially as set forth, and for the purpose specified."

The specification and claims of the first reissue were in these words :

"Figure 1 is a plan view, partly in section, of my improved seat, the section showing the middle layer of veneer. Fig. 2 is a view of my improved seat for chairs, settees, etc., this figure showing a longitudinal section of the seat, taken on the line *x x* of Fig. 1. Similar letters of reference refer to like parts in both of the figures.

This invention relates to bottoms for seats, and consists in constructing the said seats of two or more veneers of wood, with the grains crossing each other, the said veneers of wood being glued together by an adhesive substance.

I have shown in the drawing accompanying this specification three layers of veneer, applied to the construction of and forming a seat for chairs. These layers of veneer are represented by the letters *A*, *B*, and *C*. The grain of veneer *A* crosses that of veneer *B*, as shown in section in Fig. 1, and the grain of veneer *B* crosses that of veneer *C*, as seen in Fig. 2. Veneers, when thus arranged, that is to say,

Opinion of the court.

with the grains crossing each other, or diversified, will make a seat which, for durability and economy, will be found to be a very useful improvement. I make the seat either solid, or perforated as shown in Fig. 1. A slight concave configuration may be given to the seat.

The perforated seats are made by boring a round hole of any design desired ; and they may be bored either by hand or by machinery adapted for the purpose. The perforated seats are desirable, as they are ventilated and ornamental.

I have especially shown and described my improved seat for chairs. The veneers of which this seat is constructed rest upon a shoulder, *f*, of a frame, *F*, which surrounds them, as shown in Fig. 2 of the drawing. The veneers, with the grains crossed or diversified and glued together, become homogeneous, thus making a solid piece of wood, from which I make the bottom of the seat, which, when perforated and varnished, is ready for the market.

Veneers, when thus arranged, that is to say, with the grain running crosswise or in diverse directions, will make a bottom for a seat which, for economy and durability, will be found to be a very useful improvement. The bottoms thus made may be left solid, or perforated after some design agreeable to the fancy of the one having them made. A slightly concave configuration may be given to the bottom, as shown in Fig. 2, which greatly adds to the comfort of the party using it. The bottom thus made is secured to a frame, *F*, which surrounds it, and through the latter is secured to the seat-frame *K*.

Having thus described my invention, what I claim is :

1. As a new article of manufacture, a bottom for a seat, constructed of two or more veneers of thin layers of wood, with the grain of the one layer crossing that of the other, and the whole secured together with an adhesive substance, substantially as set forth.

2. As a new article of manufacture, a bottom for a seat-frame, constructed of two or more veneers or thin layers of

Opinion of the court.

wood, with the grain of the one layer crossing that of the other, said layers being secured together by an adhesive substance, and having perforations formed therein for the purpose of ventilation or ornamentation, substantially as set forth.

3. The combination of a seat-bottom, constructed of two or more veneers or thin layers of wood, with the grain of the one layer crossing that of the other, and the whole secured together by an adhesive substance, with the frame of the seat, substantially as set forth.

4. The combination of a seat-bottom, constructed of two or more veneers of thin layers of wood, the grain of the one layer crossing that of the other, and the whole secured together by an adhesive substance, and provided with perforations for the purpose of ventilation or ornamentation, with the frame of a seat, substantially as set forth.

5. As a new article of manufacture, a wooden bottom for seats, provided with perforations for the purpose of ventilation or ornamentation.

6. As a new article of manufacture, a seat-bottom constructed of two or more veneers or thin layers of wood, the grain of the one layer crossing that of the other, and secured together by an adhesive substance, said bottom thus formed having a curved or concave configuration on its upper side, substantially as set forth."

The specification and claims of the second reissue were in these words :

"The state of the art in relation to devices having a similarity to my invention may be set forth as follows: In letters patent, No. 15,552, granted" to John H. Belter, "August 19, 1856, a bedstead is described made of veneers glued together, with the grains crossing; and in such patent there is a statement that veneers crossing and glued together had been used for combining strength and lightness. In letters patent, No. 19,405," granted to John H. Belter, "February 23, 1858, chairs and other articles of furniture are described

Opinion of the court.

as made of layers of wood or veneers crossing each other, glued together, and pressed to shape. In letters patent, No. 40,509, granted November 3, 1863, boxes are described as made of veneers or layers of wood crossing each other and glued together. In letters patent, No. 23,225, granted " to Zebulon B. Bellows, " March 15, 1859, a chair-bottom is described as made of a piece of board softened by steam and pressed up to shape in molds. In letters patent, No. 110,096, December 13, 1870, a barrel is described of laminæ of wood with the grain crossing and glued together. Sheet metal perforated to form chair-bottoms is set forth in A. S. Smith's patent, reissued " to Isaac P. Tice, " June 27, 1865. Chair-seats of enameled hard rubber and gutta-percha perforated are set forth in letters patent, No. 54,863," granted to J. W. Cochran, " May 7, 1866. Letters patent, No. 51,735, granted December 26, 1865, to J. K. Mayo, sets forth numerous articles made of laminæ of wood ; and in a subsequent reissue, dated August 18, 1868, mention is made of a chair-seat, but the same was neither concave nor perforated.

My invention, as distinguished from the foregoing, relates to a new article of manufacture, consisting of a chair-seat made of veneers of wood, with the grains of one veneer crossing the other and glued together, and having a concave or dishing form, and perforated.

From the foregoing it will be apparent that I do not lay any claim to the veneers crossing each other and glued together, as these have been used for various purposes, and even for furniture, and have become public property. Neither do I claim the pressing of a chair seat into a concave form by dies. Neither do I claim a perforated seat, as sheet metal has been employed ; but it is cold to the person, and liable to break and to catch the clothing. Neither do I claim a single layer of such material as hard rubber or gutta-percha perforated. This is so expensive as not to be adapted to general use.

Opinion of the court.

My chair-seat is a new article, possessing great strength and durability. It is very light and cheap. It forms an agreeable seat. It is not hot in summer or cold in winter. The perforations give the wood a handsome appearance and afford the required ventilation ; and the seat is adapted to be secured to any chair frame, as it is easily cut and fitted to the same, and the cost of these seats is less than those made of cane, and they are much more durable.

In the drawings, Figure 1 is a plan, with the upper layer of veneer partially removed. Fig. 2 is a vertical section of the chair and seat.

I have shown three layers of veneers, A, B, C. The grain of the veneer A crosses that of the veneer B, and the grain of the veneer B crosses that of the veneer C, and these are cemented together by suitable adhesive substance, such as glue.

The seat is of a concave or dishing form, so as to be better adapted to the shape of the person, and the under side of the seat is convex.

The perforations through the seat are to be arranged to produce any design that may be agreeable to the fancy of the person making or using the chair. These perforations make the seat light, and also ventilate the same.

The edges of the seat rest upon and are secured to the chair-frame ; and in Fig. 2 the frame is rabbeted to form shoulders *f*, upon which the edges of the seat rest.

I claim as my invention—

1. As a new article of manufacture, a chair-seat formed of laminæ of wood with the grain crossed, glued together, and concave on the upper surface and convex on the lower surface, adapted to a chair-frame, substantially as set forth.

2. A chair-seat made of laminæ of wood glued together, with the grains in one layer crossing those of the next, concave on the upper surface, convex on the lower surface, and perforated, as a new article of manufacture, substantially as set forth."

Opinion of the court.

While the first reissue was in life the owners of it brought a suit in equity against the present defendants, in the same court, alleging infringement of the first five claims of the first reissue. An application being made for a preliminary injunction it was denied, in May, 1879. 16 Blatchford, 303. The patent of December, 1865, to the defendant Mayo, and division E of its reissue of August 18th, 1868 (both of them mentioned in Gardner's second reissue,) being put in evidence, it was held that what was claimed in the first claim of Gardner's first reissue was described in the two Mayo patents, both of which were reissued prior to Gardner's original patent. This related to the veneers, with crossing grains, glued together, of the first four claims of Gardner's first reissue. As to the perforations of the second, fourth, and fifth claims of that reissue, the Tice reissue of June 27th, 1865, and the Cochran patent of May 22d, 1866 (both of them mentioned in Gardner's second reissue,) were put in evidence, and it was held that they showed a chair-seat of perforated sheet metal, and one of perforated enameled India-rubber or gutta-percha, containing every feature of ventilation and ornamentation, resulting from perforations, which Gardner's perforated chair-seat exhibited; and that, in view of those prior perforated seats, there was no patentable novelty in perforating a wooden bottom. The conclusion of the court was that there was nothing new or patentable in the first five claims of Gardner's first reissue, in view of the patents referred to. It was not claimed that the sixth claim of that reissue had been infringed. The defendants' seat-bottom involved in that case was made of two or more veneers or thin layers of wood, with the grain of the one layer crossing that of the other, and the whole secured together with an adhesive substance; and there were slots or slits cut through the seat, as long as the length of the seat-bottom from front to rear, leaving longitudinal holes of that length, and thus forming ribs or slats, the effect of which was to make the seat-bottom yielding and elastic.

Opinion of the court.

A little over five months after this decision was made, the second reissue was applied for, and about four months after it was granted this suit was brought. The answer attacks the novelty and patentability of the invention and the validity of both reissues. After issue, proofs were taken, and in June, 1882, the Circuit Court rendered a decision, dismissing the bill (20 Blatch. 538,) and from the decree to that effect the plaintiffs have appealed.

The second claim is the only one in question. It will be well here to repeat it: "2. A chair-seat made of laminæ of wood glued together, with the grains in one layer crossing those of the next, concave on the upper surface, convex on the lower surface, and perforated, as a new article of manufacture, substantially as set forth." The defendants made and sold such chair-seats.

Referring to the decision as to the first reissue, to the effect that veneers, with the grains of the successive layers crossed and cemented together, adapted for the construction of chairs and settees, were shown in the two Mayo patents, and that the Mayo reissue, division E, described the shaping of the material, when made pliable, by compression in a matrix or on formers, and that the Tice and Cochran patents showed perforated chair-seats of metal and gutta-percha, the Circuit Court held, in this case, that the only question open, as to the second reissue, was whether the concavity of form, made an element of the second claim of that reissue, would support the patent. Concurring, as we do, in the views and conclusions of the court, and finding them well expressed in its opinion, we repeat them here:

"Chair-bottoms made of board and softened by steam and pressed to a concave shape in a mold, so that the form of the seat will conform to the shape of the person who may occupy it, are shown in the letters patent issued to Z. B. Bellows, bearing date March 15th, 1859. So, also, the concave or dishing form of chair-seats had been adopted long

Opinion of the court.

before Gardner's patent, in ordinary chair-seats. In the specification of the present reissue the inventor states that he does not lay any claim to the veneers crossing each other and glued together, as these have been used for various purposes and have become public property, and that he does not claim the pressing of a chair-seat into the concave form by dies.

If there was no patentable novelty in using the perforations of the metal or gutta-percha chair-seats in the veneer seat by Gardner, neither can there seem to be any in employing a well-known form of chair-seat in his veneer seat. As it had been pointed out by Mayo that the material used is pliable and can be pressed into any desired form, and as the reissue disclaims the pressing of a chair-seat into a concave form, and as chair-seats had been so formed, it is difficult to see how there was any invention in Gardner's chair-seat. Gardner merely applied a process that was old to a material that was old, to obtain an old form. Considered as a combination, it is hardly possible to believe that the perforations or the concavity performed any new functions in the Gardner seat. An ingenious feature has been presented, to the effect that the perforations and concavity cooperate, in Gardner's seat, to prevent warping and curling of the material used. If this is true, the same elements were combined in the Baillie chair-back and performed there the same functions they performed in the Gardner seat. It may be that the Gardner seat is mechanically a better seat than any which preceded it, but his improvement is not a patentable one.

It is strenuously insisted that the popularity and success achieved by the Gardner seat, beyond those of his predecessors, affords cogent evidence both of the utility and patentable novelty of his invention. The answer to this argument is that the success of his seat is probably due to a feature which is not suggested in the original patent; that is, its adaptability for use by unskilled workmen. His seats,

Opinion of the court.

as now made, can be fitted without mechanical skill to a bottomless chair, and are largely used to repair chairs in which the original seats have been worn out, and can be so used without any special skill. They are, also, largely sold to chair manufacturers, because they can be easily adapted to chairs of different sizes and seats of different forms. But the chair-seat described in Gardner's original patent, and shown in the drawings, did not practically possess this characteristic of adaptability, but was a frame-seat, which could only be fitted to a chair by a skilled laborer. Such a chair-seat would fail to meet the peculiar want which the present chair-seat supplies. Considered as a new article of manufacture, if the complainant's chair-seat has no frame, and its novelty and utility consist in its adaptability to be sold separate from the frame, and to be readily applied by any person to any chair, then the reissue is for a different invention from that disclosed in the original patent.

In conclusion, in view of the former decision of this court, the complainant can only succeed upon the theory that, by imparting a concave form to his chair-seat, he has imparted sufficient patentable novelty to his article to sustain a patent; and this, when such a form of chair-seat was old, the material used was old, and the method of imparting the form to the material was old. This theory cannot stand."

On the argument of the appeal the following considerations were strongly urged, as grounds for reversing the decree: An article of manufacture is patentable under section 4886 of the Revised Statutes, if it is new and useful. This chair-seat was new and useful. There did not exist before, as an article of manufacture, a chair-seat composed of laminæ of wood, with the grains crossed and glued together, molded to be concave, and perforated. The statute makes novelty and utility the only test of patentability. In a suit for infringement, the decision of the Commissioner of Patents is final, as to matters involved in granting a patent, except as

Opinion of the court.

to the questions specifically enumerated as defences in the five subdivisions of section 4920 of the Revised Statutes. Unless substantially the same thing existed before, the article, if useful, is new and patentable. The decision of the Commissioner of Patents to that effect is not reviewable in a suit on the patent.

It is a sufficient answer to these suggestions to say that the questions presented are not open ones in this court.

In *Mahn v. Harwood*, 112 U. S. 354, 358 [15 Am. & Eng. 322,] it was said: "The statutory defences are not the only defences which may be made against a patent. Where it is evident that the Commissioner, under a misconception of the law, has exceeded his authority in granting or reissuing a patent, there is no sound principle to prevent a party sued for its infringement from availing himself of the illegality, independent of any statutory permission so to do. * * * In cases of patents for inventions, a valid defence not given by the statute often arises where the question is whether the thing patented amounts to a patentable invention. This being a question of law the Courts are not bound by the decision of the Commissioner, although he must necessarily pass upon it." Several cases in this court were there cited to this effect.

On the other point presented it was said, in *Thompson v. Boisselier*, 114 U. S. 1, 11 [15 Am. & Eng. 549,] that, under article 1, section 8, subdivision 8 of the Constitution, a patentee "must be an inventor and he must have made a discovery;" that "the statute has always carried out this idea," referring to § 6 of the Act of July 4th, 1836, 5 Stat. 119, and § 24 of the Act of July 8th, 1870, 16 Stat. 201, and § 4886 of the Revised Statutes; that "it is not enough that a thing shall be new, in the sense that, in the shape or form in which it is produced, it shall not have been before known, and that it shall be useful, but it must, under the Constitution and the statute,

Opinion of the court.

amount to an invention or discovery.” A large number of cases in this court were there referred to, and one especially where the thing claimed was new, “in the sense that it had not been anticipated by any previous invention, and it was shown to have superior utility ; yet it was held not to be such an improvement as was entitled to be regarded in the patent law as an invention.” A case to the same effect at this term is *Yale Lock Mfg. Co. v. Greenleaf*, 117 U. S. 554 [p. 303 *ante*.]

It is strongly urged that Gardner’s seat is cheap, strong, durable, can be applied to different chair-seat frames, can be sold separate from chair-seat frames, and can be applied to chair-seat frames by unskilled labor ; and that, therefore, it was patentable. But these views are fully met by the observations of the Court below, above set forth.

The fabric being old, the suggestion to construct chair-seats out of it being old, the shaping of it in a former being old, the perforation of a seat for ventilation and ornamentation being old, and the giving of a concave shape to a wooden seat by pressure being old, there cannot, in view of the disclaimers in the second reissue, be anything patentable in the structure. It was convenient to sell and convenient to buy, and commercially a good article. But a patent cannot be taken out for an article, old in purpose and shape and mode of use, when made for the first time out of an existing material, and with accompaniments before applied to such an article, merely because the idea has occurred that it would be a good thing to make the article out of that particular old material. Beyond that, the suggestion in the second reissue that “the seat is adapted to be secured to any chair-frame, as it is easily cut and fitted to the same,” is not found in the original patent, or in the first reissue, and is new matter, so far as anything in it can be invoked to confer patentability on the article.

The second reissue appears, by the decision of the examiners-in-chief of the Patent Office, on appeal, found in the

Opinion of the court.

record, to have been granted on the sole ground that Gardner's chair-seat was an independent article, formed and shaped as described, to be put on the market by itself, and ready to be attached to a chair-frame, and not to be marketed as a component part of a chair, but as a seat ready to be fitted and affixed to a chair. Nothing to this purport being found in the original patent, or in the first reissue, and the first reissue having been applied for more than three years and ten months, and the second reissue more than seven years and five months, after the original patent was granted, no ground for patentability can be derived from the insertion of such suggestions in the second reissue.

There was a recent instructive case in England, in the Court of Appeal, before Lord Coleridge and Justices Field and Bowen (*Saxby v. Gloucester Waggon Co.*, 7 Q. B. Div. 305,) where the question was, whether "the invention specified was such a substantial improvement on what had already been known and published as to render it the proper subject of a patent." The specified patented combination did not before exist, but it existed with the exception of two pieces of mechanism, and their use for the purpose of doing what they did in the combination was well known. But it was held that the combination might have been made "by any intelligent mechanical workman," with no other instructions than those contained in a prior patent to the same inventor; and that there was no novelty in the combination sufficient to constitute a patent. In regard to another branch of the case, it appeared that, taking two prior separate inventions together, every element of the patent in question was to be found in one or the other of these inventions, and it was held that the combination of the two prior inventions did not require "an exercise of such an amount of skill and ingenuity as to entitle it to the protection of an exclusive grant." This case is referred to for the purpose of showing that the question of patentability, as depending on the *quantum* of inventive skill in a given case, is one

Notes and citations.

which the courts of England consider in a suit for infringement. See also *Penn. R. R. Co. v. Locomotive Truck Co.*, 110 U. S. 490 [15 Am. & Eng. 148,] and the cases there collected.

The decree of the Circuit Court is affirmed.

118 U. S. 193.

Notes:

2. Act 1790, sec. 6; Act 1793, sec. 6; Act 1836, sec. 15; Act 1870, sec. 61; **R. S. sec. 4920.**

Special defences that may be made to a patent considered:

Bates v. Coe, 98 U. S. 31 [12 Am. & Eng. 150;] and see *United States v. American Bell Telephone Co.*, 128 U. S. 315.

3. Act 1790, sec. 1; Act. 1793, sec. 1; Act 1800, sec. 1; Act 1836, sec. 6; Act 1863, sec. 1; Act 1870, sec. 24; **R. S. sec. 4886.**

Unpatentable novelty :

Glue Co. v. Upton, 97 U. S. 3 [11 Am. & Eng. 458.]

Thompson v. Boisselier, 114 U. S. 1 [15 Am. & Eng. 549.]

Patent in suit :

No. 127,045. Gardner, G. May 21, 1872. Reissue No. 7,203. July 4, 1876. Reissue No. 9,094. February 24, 1880. Chair-Seat.

OTHER SUITS ON SAME PATENT:

Gardner v. Herz, 1879. 16 Blatch. 303 ; 4 Ban. & Ard. 320 ; 16 O. G. 1093.

Notes and citations.

Gardner *v.* Herz, 1882. 20 Blatch. 538; 22 O. G. 683; 14 Reporter, 139.

Cited:

IN SUPREME COURT IN :

Clark Pomace Holder Co. *v.* Ferguson, 1886. 119 U. S. 335; Bk. 30 L. ed. 406.

Thatcher Heating Co. *v.* Burtis, 1887. 121 U. S. 286; Bk. 30 L. ed. 942.

Hill *v.* Wooster, 1889. 132 U. S. 693.

IN CIRCUIT COURTS IN :

Consolidated Fruit Jar Co. *v.* Bellaire Stamping Co., June, 1886. 28 Fed. Rep. 91; 36 O. G. 121.

Cooke *v.* Globe File Co., March, 1887. 31 Fed. Rep. 43.

Mott Iron Works *v.* Cassidy, March, 1887. 31 Fed. Rep. 47.

United States Bung Mnfg. Co. *v.* Independent Bung & Bushing Co., May, 1887. 24 Blatch. 406; 31 Fed. Rep. 76.

Cluett *v.* Claflin, June, 1887. 41 O. G. 1042.

Landesman *v.* Jonasson, September, 1887. 32 Fed. Rep. 590.

United States *v.* American Bell Tel. Co., September, 1887. 32 Fed. Rep. 591; 41 O. G. 123.

Celluloid Mnfg. Co. *v.* American Zylonite Co., June, 1888. 35 Fed. Rep. 417.

Notes and citations.

IN TEXT BOOKS:

Walker on Pats., 2d ed., 1889. pp. 21, 27.

Syllabus.

CONSOLIDATED SAFETY-VALVE COMPANY, APPELLANT, v. ERASTUS B. KUNKLE.*

119 U. S. 45-46. Oct. Term, 1886.

[Bk. 30, L. ed. 302; 37 O. G. 1003.]

Affirming *Ibid*, 14 Fed. Rep. 732.

Argued October 27, 28, 1886. Decided November 15, 1886.

Particular patent construed, limited, and not infringed.

1. The claims of letters patent, No. 58,294, September 25, 1866, and No. 85,963, January 19, 1869, both of them granted to G. W. Richardson for Safety-Valves, construed as limited in the case of the Safety-Valve Co. v. Crosby Steam Gage & Valve Co., 113 U. S. 157 [15 Am. & Eng. 460,] to include as essential elements a huddling-chamber, and a strictured orifice from the huddling chamber to the open air and, *held*, not infringed by a valve which has no huddling-chamber and no strictured orifice from a huddling-chamber to the open air. (p. 394.)

[Citation in the opinion of the court :]

Consolidated Safety-Valve Co. v. Crosby Steam Gage & Valve Co., 113 U. S. 157 [15 Am. & Eng. 460.] p. 394.

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The case is stated by the court.

Mr. Thos. Wm. Clarke, for appellant :

This court held in the Crosby case, 113 U. S. 176 [15 Am. & Eng. 460,] and nothing has been advanced in this case to militate against or modify the construction of the Richardson patent as there given—that the claim of the patent of 1866 covers “a valve in which are combined an initial area, an additional area, a huddling-chamber beneath the additional area, and a strictured orifice leading from the hud-

* See Explanation of Notes, page III.

Argument of counsel.

dling-chamber to the open air, the orifice being proportioned to the strength of the spring as directed."

The Kunkle valve "A," is, according to Mr. Forbes, made and proportioned as set forth in Richardson's patent of 1866, and operates identically like it.

Whatever difference there is between Kunkle Exhibit A, and the Richardson valve of the patent of 1866, is due to a modification of no greater importance than would be that of dividing a brigade of forty-eight hundred men, according to the Prussian system, into two regiments of three battalions each; or, according to the French system, into three regiments of two battalions each; or, according to the old English and American system, into five regiments of one battalion each.

It is a mere question of detail, as all the Kunkle valves (A, B, and C") complained of are alike in this respect, they all infringe the patent of 1866; for the additional lifting force is applied to the additional area by the pressure of steam in the huddling-chamber beneath the additional area, being retained therein by a strictured orifice leading therefrom.

The only reason given why there is no infringement is the erroneous notion that Richardson announced a necessary relation to exist between the size of the stricture and the opening at the ground-joint, which we have seen was not so.

Defendants' construction of the Richardson patent of 1866 fails to relieve them, and the infringement is plain in all those of the valves pursued.

Mr. James H. Raymond, for appellee:

On the question of infringement we shall find that the record and the argument of complainant proceeds, on that question, solely upon identity of results. Identity of results, however, is never *per se* conclusive, for it is not results but means and their well-known equivalents which are protected, and form the subject matter of patents and the patent laws.

Argument of counsel.

The Kunkle valve differs in every operative element and combination from the valve passed upon in the Crosby case. The present question of infringement is entirely new. The valves now charged also differ in structural elements, in combination and in operation from the valves shown in the Richardson patents.

In defendant's valve, steam, on escaping from the slightly open ground joint, escapes through a series of passages which grow gradually larger all the way, and in nowhere contracted or "huddled," but goes on with pressure constantly diminishing till it reaches the open air. This uninterrupted, progressive expansion of escaping steam is due to the absence of a narrow space or stricture—to the absence of overlaps. Indeed, as there is no stricture, no lips, rims, or walls of any stricture less in area than any preceding space, opening, or orifice, there can be no overlap, for there is nothing *to be overlapped*.

No *compression* is possible in any of the Kunkle passages, and any malformation, any mal-adjustment, or any tampering with a Kunkle valve which should result in producing any "huddling," or intermediate pressure between the open ground joint and the open air; anything at all resembling the operation of escaping steam such as is indispensable in Richardson's valve, whether of 1866 or 1869—any impediment to free escape and continuous expansions with constantly diminishing pressure, would be fatal to the operation of such Kunkle valve.

On the authority of *Wicke v. Ostrum*, 103 U. S. 461 [13 Am. & Eng. 114,] which is the leading case for the doctrine there stated in the opinion delivered by his honor, the Chief Justice, it matters not, for any purpose of this case, whether Richardson was or was not the first to utilize a screw-ring in a safety-valve, for he is by law limited, in the proper construction of the claim of his patent, to *all* the means therein described which are *necessary* to attain the object of his invention, and "the mechanical equivalents of his several elements known at the time of his invention if used

Opinion of the court.

in the same combination." This necessarily follows from the fundamental doctrine that no one can properly claim all ways of accomplishing any one object, which doctrine, since the decision in 1853, of *O'Reilly v. Morse*, 15 How. 62 [5 Am. & Eng. 483,] has been, by this court most rigorously enforced.

Mr. Justice BLATCHFORD delivered the opinion of the court.

This is an appeal by the plaintiff in a suit in equity to recover for the infringement of two letters patent, from a decree dismissing the bill. The suit was brought in the Circuit Court of the United States for the Northern District of Illinois, by the Consolidated Safety-Valve Company, a Connecticut corporation, against Erastus B. Kunkle, on letters patent No. 58,294, granted to George W. Richardson, September 25th, 1866, for an improvement in safety-valves, and on other letters patent, No. 85,963, granted to the same person, January 19th, 1869, for an improvement in safety-valves for steam boilers or generators. These are the same two patents which were the subject-matter of the litigation involved in the case of *Consolidated Safety-Valve Company v. Crosby Steam-Gage & Valve Company*, decided by this court at October Term, 1884 and reported in 113 U. S. 157 [15 Am. & Eng. 460.] The specifications and claims and drawings of the two patents are set forth fully in the report of that case. The patents were, both of them, held to be valid and to have been infringed.

The claim of the patent of 1866, "A safety-valve, with the circular or annular flange or lip *c c*, constructed in the manner, or substantially in the manner, shown, so as to operate as and for the purpose herein described," was construed as covering "a valve in which are combined an initial area, an additional area, a huddling-chamber beneath the additional area, and a strictured orifice leading from the huddling-chamber to the open air, the orifice being proportioned to the strength of the spring as directed."

Notes and citations.

The claim of the patent of 1869, "The combination of the surface beyond the seat of the safety-valve, with the means herein described for regulating or adjusting the area of the passage for the escape of steam, substantially as and for the purpose described," was construed as covering "the combination with the surface of the huddling-chamber, and the strictured orifice, of a screw ring to be moved up or down to obstruct such orifice more or less, in the manner described."

The decree in the present case was made in January, 1883, and proceeded, as it states, on the ground that the defendant's valve did not infringe the patents. This also appears from the decision of the Circuit Court, reported in 14 Fed. Rep. 732. As the defendant's valves have no huddling-chamber, and no strictured orifice leading from a huddling-chamber to the open air, we are of opinion that they do not infringe either of the patents.

Decree affirmed.

119 U. S. 46.

Patents in suit :

No. 58,294. Richardson, G. W. September 25, 1866. Safety-Valve.

No. 85,963. Richardson, G. W. January 19, 1869. Safety-Valve.

OTHER SUITS ON SAME PATENT :

Consolidated Safety-Valve Co. v. Crosby Steam-Gage & Valve Co., 1881. 7 Fed. Rep. 768.

Consolidated Safety-Valve Co. v. Kunkle, 1883. 14 Fed. Rep. 732 ; 23 O. G. 630.

Consolidated Safety-Valve Co. v. Crosby Steam-Gage & Valve Co., 1884. 113 U. S. 157 [15 Am. & Eng. 460.]

Consolidated Safety-Valve Co. v. Ashton Valve Co., 1886. 26 Fed. Rep. 319.

Syllabus.

THEODORE T. WHITE, WILLIAM A. GORDON AND
EMMET C. PECOR, APPELLANTS, v. GEORGE H.
DUNBAR, FRANCIS B. DUNBAR, AND CHAR-
LOTTE Z. DUNBAR.*

119 U. S. 47-52. Oct. Term, 1886.

[Bk 30, L. ed. 303 ; 37 O. G. 1002.]

Reversing Dunbar v. White, 4 Woods, 116.

Argued October 29, November 1, 1886. Decided November 15, 1886.

*Particular reissued patent. Invalid expansion. Statement of ob-
ject of invention. Construction of claim. Intervening rights
prior to reissue.*

1. Where the original letters patent, No. 178,916, G. W. Dunbar, June 20, 1876, Preserving Shrimp, covered the use of a textile fabric between the can and its contents, while the reissue, No. 9,957 of December 6, 1881, covered the use of an enveloping material for the shrimps between the can and the shrimps. *Held*, that this was a material expansion and enlargement, and the reissue was adjudged to be invalid. (p. 401.)
2. The statement of the object of the invention in the specification is a different thing from the invention itself. (p. 406.)
3. While the specification may be resorted to for a better understanding of the claim, it cannot be used for the purpose of changing it. (p. 407.)
4. The claim is a statutory requirement calling for precision on the part of the patentee, and must be construed in accordance with the plain import of its terms. (p. 408.)
5. While rights of other parties intervening between the original patent and its reissue may illustrate the evil consequences of improper reissues, they add nothing to its illegality, which is determined from general principles of law applied to the statutes. (p. 408.)

[Citations in the opinion of the court:]

Keystone Bridge Co. v. Phoenix Iron Co., 95 U. S. 274 [11 Am. & Eng. 364.] p. 408.

*See Explanation of Notes, page III.

Argument of counsel.

James v. Campbell, 104 U. S. 356 [13 Am. & Eng. 341.] p. 408.

Miller v. Brass Co., [13 Am. & Eng. 303.] p. 408.

Appeal from the Circuit Court of the United States for the Eastern District of Louisiana.

The case is stated by the court.

Messrs. William G. Henderson, Joseph P. Hornor, F. W. Baker, and Joyce & Spear, for appellants :

If the state of the art shows, as we contend it does, that the enveloping of tea in lead before putting it into wooden boxes to preserve the flavor of the tea ; the putting jelly in paper bags before putting it into cans, and many other equally familiar illustrations, have been done for ages, then there can be no novelty in complainants' device, and therefore they have no legal right to appropriate it to themselves under the protection of a patent. Rubber-Tip Pencil Co. v. Howard, 20 Wall. 498 [9 Am. & Eng. 390 ;] Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272 ;] Terhune v. Phillips, 99 U. S. 593 [12 Am. & Eng. 270.]

It was held by this court in the case of the Giant Powder Co. v. California Powder Works, 15 O. G. 289 ; 98 U. S. 126 [12 Am. & Eng. 201,] that "a reissue can only be granted for the same invention which formed the subject of the original patent of which it is a reissue. The express words of the statute are, 'a new patent for the same invention' and 'no new matter shall be introduced into the specification.'"

"This privilege of reissue was not given to the patentee in order that the patent may be rendered more elastic or expansive, and therefore more available for the suppression of all other inventions." Burr v. Duryee, 1 Wall. 577 [7 Am. & Eng. 224 ;] Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.]

The statute embraces only the right to a reissue where, from an unintentional error in the description of the invention, the patent is wholly inoperative or invalid. Whiteley v. Swayne, 7 Wall. 685 [8 Am. & Eng. 70 ;] Whiteley v. Swayne, 4 Fish. 117.

Argument of counsel.

And even in a case involving accident or mistake, nothing but what was shown in the original specification, drawings, or model can be introduced into a reissue. *Goodyear v. Prov. Rubber Co.*, 2 Fish. 499.

In the case at bar there were neither drawings nor model showing the new matter embraced in the reissue, and nothing mentioned or described in the specification except a "*textile fabric*."

In the case at bar there is no proof and can be no pretense that the original patent was inoperative or invalid, or that there was either accident or mistake in drawing, specification, or claims; and the conclusion is irresistible that the only possible object of the reissue must have been to *enlarge and generalize* the claim.

Russell v. Dodge, 93 U. S. 464 [10 Am. & Eng. 495;] *Powder Co. v. Powder Works*, 98 U. S. 138 [12 Am. & Eng. 201;] *Miller v. Brass Co.*, 104 U. S. 351 [13 Am. & Eng. 303;] *James v. Campbell*, 104 U. S. 373 [13 Am. & Eng. 341;] *Searls v. Bouton*, 12 Fed. Rep. 874.

As covering the whole subject of reissued patents, and abundantly supporting the view we take of this case, we would refer to the following additional cases:

Giant Powder Co. v. Cal. Vigorit Powder Co., 18 O. G. 1340; *Glue Co. v. Upton*, 97 U. S. 3 [11 Am. & Eng. 458;] *Railway Co. v. Sayles*, 97 U. S. 563 [12 Am. & Eng. 121;] *Russell v. Dodge*, 93 U. S. 460 [10 Am. & Eng. 495;] *Powder Co. v. Powder Works*, 98 U. S. 138 [12 Am. & Eng. 201;] *Burr v. Duryee*, 1 Wall. 531 [7 Am. & Eng. 224;] *Carlton v. Bokee*, 17 Wall. 463 [9 Am. & Eng. 91;] *Combined Patents Can Co. v. Lloyd*, 21 O. G. 713; *Sheriff v. Fulton*, 22 O. G. 87; *Sarven v. Hall*, 9 Blatch. 524; U. S. & Foreign Salamander Felting Co. v. Haven, 2 Ban. & Ard. 164; *Mahn v. Harwood*, 112 U. S. 354 [15 Am. & Eng. 322.]

Mr. Melville Church and Joseph B. Church, for appellees:

This court in recent cases has declared in effect: 1. That

Argument of counsel.

no claim can be sustained in a reissue which is broader than the claim or claims of the original *unless the reissue be applied for promptly*.

Torrent & Arms Lumber Co. v. Rodgers, 112 U. S. 659 [15 Am. & Eng. 396 ;] Coon v. Wilson, 5 S. C. R. 537 [15 Am. & Eng. 504 ;] Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303 ;] Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322 ;] McMurray v. Mallory, 111 U. S. 97 [15 Am. & Eng. 171 ;] Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454 ;] Moffitt v. Rogers, 106 U. S. 423 [14 Am. & Eng. 244.]

2. That no claim in a reissue can be valid which is for a different invention from that *claimed* in the original.

Coon v. Wilson, 113 U. S. 268 [15 Am. & Eng. 504 ;] Eachus v. Broomall, 115 U. S. 429 [p. 176 *ante* ;] Turner & Seymour Mnfg. Co. v. Dover Stamping Co., 111 U. S. 319 [15 Am. & Eng. 238 ;] Clements v. Odorless Excavating Apparatus Co., 109 U. S. 641 [15 Am. & Eng. 44 ;] Wing v. Anthony, 106 U. S. 142 [14 Am. & Eng. 188.]

3. That a claim made in an original patent and repeated in a reissue is valid.

McMurray v. Mallory, 111 U. S. 97 [15 Am. & Eng. 171 ;] Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454.]

4. That the claim of a reissue will be so construed as, if possible, to cover no more than the claim of the original. Mnfg. Co. v. Ladd, 102 U. S. 408 [13 Am. & Eng. 1.] See also, Brainard v. Cramme, 12 Fed. Rep. 623.

Examined critically in the light of these declarations as to what the law is, we think the reissue in suit will be found clearly valid.

The claims of both original and reissue are for a mode or method of preserving shrimps whereby the discoloration of the shrimps is prevented.

The claim of the original on its face without reference to its accompanying specification is, in one sense, broader than the reissue, and the claim of the reissue is likewise, on its face and without reference to its specification, broader than the original, yet both claims, when considered with refer-

Opinion of the court.

ence to their respective specifications, are of equal scope and for the same invention.

Both claims, however, refer back by the words "substantially as described" or their equivalent, to their respective specifications, and must be construed in the light of the same—as this court has decided. *Seymour v. Osborne*, 11 Wall. 516 [8 Am. & Eng. 290;] *Curtis on Pats.*, §§ 225, 227.

This rule of construction is a rule of law, because it is a rule of common sense. A claim is simply the epitome of the specification, and unless reference could be made back to the latter for explanation, it would nearly always be meaningless.

Mr. Justice BRADLEY delivered the opinion of the court:

This is a suit on a reissued patent. The appellees obtained a patent dated June 20th, 1876, for a method of preserving shrimps and other shell-fish by placing them in a bag or sack made of cotton, muslin, or other textile fabric, and then sealing them up in a metallic can, and subjecting them to a boiling process. In their specification they declare that the object of placing the shrimp in the bag is to keep them from coming in direct contact with the can, and thus prevent their discoloration and loss of flavor. They describe the process as follows:

"The shell having been removed from the shrimp in the usual manner, the fish is thrown into salt water of about six degrees, and there remains for an hour, more or less, and from thence to kettles filled with water and brought to a boiling heat, after which they are placed on dippers, and cooled and thoroughly rinsed with fresh cold water, and from which, so soon as thoroughly dripped, in a moist condition, they are placed in a sack B, the same having been previously arranged in the can A, and without the addition of any salted or otherwise prepared liquid. So soon as the sack is filled, the mouth thereof being properly secured, the lid or head *a* is placed in position on the can A and immediately sealed.

Opinion of the court.

“The cans are then subjected to a steam bath, or placed in kettles containing boiling water, and boiled for two hours at the highest temperature attainable, and which completes the process.”

The claim is then stated as follows :

“What we claim as new, and desire to secure by letters patent, is

“The herein described method of preserving shrimps, etc., preventing their discoloration, which consists in placing textile fabric between the can and its contents, and then sealing the can and subjecting the same to a boiling process, substantially as and for the purpose specified.”

In April, 1880, Pecor, one of the appellants, together with one Bartlett, obtained a patent for another method of preserving shrimps, by first lining the inside of the can with a coating of asphaltum cement, and then with paper coated with a solution of paraffine, or kindred substance ; the can is then filled with shrimp, sealed up, and subjected to the boiling or steaming process, in the usual manner of canning vegetables and meats.

In April, 1881, the appellees surrendered their original patent, and applied for a reissue thereof, which was granted in December, 1881. In the new specification they described their process to consist, first, providing the can with a lining to prevent direct contact of the shrimps with the metal, and, second, placing them in the lined can while they are in a dry or moist condition and devoid of free liquid or gravy, sealing the can without adding any liquid to its contents, and cooking the contents of the can after sealing. They add that “there is nothing arbitrary about the peculiar form and construction of the textile fabric lining, as other forms and arrangements might be substituted therefor;” and again, “B is the lining, constructed preferably of cotton or muslin.” The claim of the reissued patent is in the following words :

“What we claim as new, and desire to secure by letters patent, is

G. W., G. H. & F. B. DUNBAR.
METHOD OF PRESERVING SHRIMPS AND OTHER SHELL-FISH.
No. 178,916. **Patented June 20, 1876.**

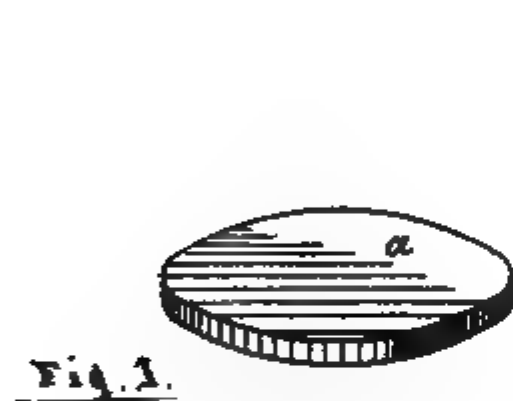


Fig. 2.

Witnesses.

H. A. Jenkins
J. C. Hubbell

Inventors.

G. W. Dunbar
G. H. Dunbar
F. B. Dunbar

Opinion of the court.

“As an improvement in the art of preserving shrimps in metal cans, the mode of preventing the discoloration of the shrimps, which consists in interposing between the metal can and the shrimps an enveloping material for the shrimps, which is not itself capable of discoloring the shrimps, and then sealing the can and subjecting the same and its contents to a boiling process, substantially as described.”

In March, 1882, the appellants commenced the canning of shrimps, and in their answer state that all the business of canning shrimps that they have ever done has been under the authority of the patent granted to Pecor and Bartlett. They further describe the process used by them as follows:

“The common tin cans being ready for packing, three pieces of paper, previously boiled in paraffine wax or coated with same, are cut and placed in the can, so that one piece covers the bottom, another piece the sides, and a third piece the top of the contents when the can is filled; the shrimps are then picked raw, then washed and thoroughly cooked for about twenty minutes, until fit to eat; they are then placed in the cans, which are soldered, and then put into a steam retort without water, which is heated to 240° Fahrenheit, where they remain from two and a half to three hours, which process has the effect of condensing the air and liquids in the can, and exterminating any animal or vegetable life that may remain in the contents of the can, after which they are ready to be labeled and sold.”

The process thus used by the appellants is claimed by the appellees to be an infringement of their reissued patent; they also contend that the claim of the reissued patent is no broader than that of the original properly construed.

In the latter proposition we cannot concur. The claim in the original patent was for placing textile fabric between the can and its contents; whilst in the reissue it is for interposing between the metal can and the shrimps an enveloping material for the shrimps. This is certainly, on its face, a very important enlargement of the claim; and we

Opinion of the court.

see nothing in the context of the specification in the original patent which could possibly give the claim so broad a construction. The description of the invention, throughout, specifies a textile fabric as the material to be interposed between the shrimp and the metallic can. It is true that the object of the invention is stated to be "to prevent the article to be preserved from coming in direct contact with the surface of the can." But the object of an invention is a very different thing from the invention itself. The object may be accomplished in many ways; the invention shows one way. Again, in describing the nature of the improvement, the patentees say:

"Primarily, our improvement consists in so placing a suitable textile fabric between the fish or other article of food to be preserved as to cause it to intervene as to prevent, under all circumstances, any direct contact between the metallic surface of the can and its contents; and it is the employment of such textile fabric, in connection with the process hereinafter described of treating the fish or other article, both before and after the same is placed in the can and sealed, which constitutes the nature or subject-matter of our present invention."

Then, in describing the apparatus used, referring to the figures annexed to the specification (which are not necessary to the understanding of the description,) they say:

"In the accompanying drawing is illustrated, at Figure 1. a metallic can, such as is ordinarily used for articles of food which are offered to the trade in a canned state. Fig. 2 is a textile lining, which we propose usually to make (although there is nothing arbitrary about the form, as other forms may be used) in the form of a cylindrical bag or sack, the diameter of which, when filled, is to be such as will permit of its fitting snugly within the can.

"A is the metallic can; *a*, its lid or cover. B is the bag or sack, constructed of cotton, muslin, or any other suitable textile fabric. Material of the cheapest and most inferior quality

Opinion of the court.

may be used, as the sole object of its use is to prevent the article to be preserved from coming in direct contact with the surface of the can, and which contact with the metal, in the case of the shrimp, causes, during the process of boiling, and all along thereafter until the can is opened, a profuse precipitation of a black substance, generally believed to be sulphur, and which supposition is based upon the fact that the shrimp is said to possess a much larger proportion of sulphur than other shell-fish. The substance thus precipitated not only discolours the fish (shrimp,) but detracts much from the color, freshness, and richness of its flavor. Now, practical experience has fully demonstrated the fact that, by using a textile fabric as described, the precipitation of the substance alluded to is prevented, or at least does not appear either on the fabric or metal; hence, the value and importance of this feature of our invention; *b*, Fig. 3, is a circular piece cut out of material similar to that of which the bag B is made, and which is inserted within the mouth of the latter after the same is filled with the fish or other article to be preserved.

“Such a can and lining, as herein described, are admirably adapted for the purpose attained by our present invention; but, as before stated, there is nothing arbitrary about the peculiar form or construction of the textile fabric lining, as other forms and arrangements might be substituted therefor without in any manner altering the principle of the invention.”

We see nothing in all this to raise the slightest implication that the patentees were the inventors of the process of interposing any and every kind of lining between the cans and their contents; and when their claim is confined to a lining of textile fabric, it is tantamount to a declaration that they claimed nothing else.

Some persons seem to suppose that a claim in a patent is like a nose of wax which may be turned and twisted in any direction, by merely referring to the specification, so as to

Opinion of the court.

make it include something more than, or something different from, what its words express. The context may undoubtedly be resorted to, and often is resorted to, for the purpose of better understanding the meaning of the claim ; but not for the purpose of changing it and making it different from what it is. The claim is a statutory requirement, prescribed for the very purpose of making the patentee define precisely what his invention is ; and it is unjust to the public, as well as an evasion of the law, to construe it in a manner different from the plain import of its terms. This has been so often expressed in the opinions of this court that it is unnecessary to pursue the subject further. See *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U. S. 274, 278 [11 Am. & Eng. 364 ;] *James v. Campbell*, 104 U. S. 356, 370 [13 Am. & Eng. 341.]

We are clearly of opinion, therefore, that the original patent is not susceptible of the broad construction which the appellees would give to it ; and that the reissued patent is a material expansion and enlargement of it. As such expansion appears to be the only object of the reissue, and as the application for the reissue was not made until nearly five years after the original was granted, the case comes within the ruling of *Miller v. Brass Co.*, 104 U. S. 350 [13 Am. & Eng. 303,] and subsequent cases to the same purport.

We attach no importance to the fact that between the date of the original patent and the application for the reissue, the patent to Pecor and Bartlett was granted. It is, indeed, quite apparent that the appellees applied for a reissue in consequence of that patent, and in order to prevent the canning of shrimps under it. The circumstance that other improvements and inventions, made after the issue of a patent, are often sought to be suppressed or appropriated by an unauthorized reissue, has sometimes been referred to for the purpose of illustrating the evil consequences of granting such reissues ; but it adds nothing to their ille-

Notes and citations.

gality. That is deduced from general principles of law as applied to the statutes authorizing reissues, and affecting the rights of the government and the public.

In our judgment the reissued patent in this case was unlawfully granted, and the bill should have been dismissed.

The decree of the Circuit Court is therefore reversed and the case remanded, with directions to dismiss the bill.

119 U. S. 52.

Notes :

3. Specification cannot expand claim :

Merrill v. Yeomans, 94 U. S. 568 [11 Am. & Eng. 203.]

Railroad v. Mellon, 104 U. S. 112 [13 Am. & Eng. 200.]

Yale Lock Mnfg. Co. v. Sargent, 117 U. S. 373 [p. 264
ante.]

Dryfoos v. Wiese, 124 U. S. 32.

2. Statement of object of invention—effect on reissue claims :

Parker & Whipple v. Yale Clock Co., 123 U. S. 1.

4. Statutory requirement of a claim :

Brooks v. Fiske, 15 How. 252 [6 Am. & Eng. 15.]

Railroad v. Mellon, 104 U. S. 112 [13 Am. & Eng. 200.]

Patent in suit :

No. 178,916. Dunbar, G. W. June 20, 1876. Reissue, No.
9,957, December 6, 1881. Preserving Shrimp.

Notes and citations.

OTHER SUITS ON SAME PATENT :

Dunbar v. White, 1883. 4 Woods, 116; 15 Fed. Rep. 747; 23 O. G. 1446.

White v. Dunbar, 1883. 26 O. G. 353 [15 Am. & Eng. 27.]

Cited :

IN SUPREME COURT IN :

Crawford v. Heysinger, 1887. 123 U. S. 589.

Hendy v. Golden State & Miners Iron Works, 1888. 127 U. S. 370; Bk., 32 L. ed. 207.

Roemer v. Peddie, 1889. 132 U. S. 313.

IN CIRCUIT COURTS IN :

Temple Pump Co. v. Goss Pump & Rubber Bucket Mnfg. Co., May, 1887. 31 Fed. Rep. 292.

Railway Register Mnfg. Co. v. Third Ave. Ry. Co., October, 1887. 33 Fed. Rep. 31.

Thompson v. Gildersleeve, February, 1888. 34 Fed. Rep. 43; 43 O. G. 886.

Dickinson v. Parker, April, 1889. 38 Fed. Rep. 411.

IN TEXT BOOKS :

Walker on Patrs. 2d ed., 1889. pp. 142, 180, 188.

Oct., 1886.]

WHITE v. DUNBAR.

411

Syllabus.

CHARLES H. HAPGOOD ET AL., APPELLANTS, v.
HORACE L. HEWITT.*

119 U. S. 226-234. Oct. Term, 1886.

[Bk. 30, L. ed. 369 ; 37 O. G. 1247.]

Affirming *Ibid*, 11 Biss. 184.

Argued November 10, 11, 1886. Decided November 29, 1886.

Employer and employé—inventor. License. Injunction. Equity relief.

1. An employé of a corporation made an invention in the direct line of its business while in its pay, and used material and labor wholly paid for by it, but was under no special contract to invent for it, and there being no circumstances from which it might fairly be inferred that he was required or expected to invent for it, *held*, that he did not thereby give such corporation a right to an assignment of the patent granted for such invention. (p. 421.)
2. Under such circumstances the corporation had only a naked license to make and sell the patented improvement as a part of its business. (p. 421.)
3. The right was a mere personal one, was not transferable, and was extinguished with the dissolution of the corporation. (p. 421.)
4. The bill asked to have the patentee enjoined from bringing any action for infringement at law or in equity against said corporation. As the patentee could only bring a suit at law against the trustees or stockholders of said corporation for infringements by it while it existed, and the theory of the bill discloses a perfect defence to such suit, no equity court, certainly no Circuit Court, of the United States, will interfere to enjoin a pending suit at law, much less the bringing of one in the future. (p. 422.)

[Citations in the opinion of the court:]

Hapgood v. Hewitt, 11 Biss. 184. p. 421.

* See Explanation of Notes, page III.

Argument of counsel.

McClurg v. Kingsland, 1 How. 202 [4 Am. & Eng. 382.] p. 421.

Continental Windmill Co. v. Empire Windmill Co., 8 Blatch. 295. p. 421.

Whiting v. Graves, 3 Ban. & Ard. 222. p. 421.

Wilkens v. Spafford, 3 Ban. & Ard. 274. p. 422.

Troy Iron & Nail Factory v. Corning, 14 How. 193 [5 Am. & Eng. 375.] p. 422.

Oliver v. Rumford Chemical Works, 109 U. S. 75 [14 Am. & Eng. 532.] p. 422.

Grand Chute v. Winegar, 15 Wall. 373. p. 423.

Appeal from the Circuit Court of the United States for the District of Indiana.

The case is stated by the court.

Messrs. E. W. Pattison and Newton Crane, for appellants :

1. Under the facts alleged in the amended bill the corporation of Hapgood & Company was the equitable owner of the patent issued to the defendant.

McClurg v. Kingsland, 1 How. 202 [4 Am. & Eng. 382 ;] Wilkins v. Spafford, 13 Pat. Off. Gaz. 675 ; Whiting v. Graves, 13 Pat. Off. Gaz. 455 ; Continental Windmill Co. v. Empire Windmill Co., 8 Blatch. 295 ; S. C. 4 Fish. Pat. Cas. 428 ; Gower v. Andrew, 59 Cal. 119 ; Grumley v. Webb, 44 Mo. 444.

2. If the right which accrued to Hapgood & Company was only a license, that is sufficient to support the suit instituted by the trustees.

3. Such license is transmissible to the new corporation, the Hapgood Plow Company.

Brooks v. Byam, 2 Story, 525 ; Curt. Pat. 4th ed. 213 ; Wilson v. Stolly, 5 McLean, 1 ; Goodyear v. Cong. Rubber Co., 3 Blatch. 449 ; Goff v. Oberteuffer, 3 Phil. 71.

4. Appellants have no adequate remedy at law, and the case as presented by the bill falls within the equity jurisdiction of the court.

1 Story, Eq. Jur. 669, 703 ; Hartford v. Chipman, 21 Conn. 488 ; Barber v. Barber, 21 How. 592.

Argument of counsel.

Messrs. E. E. Wood and Edward Boyd, for appellee :

Now, while the whole bill is uncertain, so much of it as states the contract of employment is clear and unambiguous, "said corporation did employ him to devote his time and services to getting up, improving, and perfecting plows and other goods adapted to the southern plow trade, and to introduce the same."

We admit that the employment, as stated in the bill, comes within the rule laid down in *McClurg v. Kingsland*, 1 How. 202 [4 Am. & Eng. 382,] and operated as a license to Hapgood & Co. to manufacture and sell any improvement made or introduced by the defendant while in its employ, but think that it did not confer upon the company any legal title to inventions or letters patent therefor.

Whiting v. Graves, 3 Ban. & Ard. 222.

The appellants, who are trustees of the defunct corporation, under the laws of Missouri, for the purpose of winding up its affairs, cannot stand in any better position than the corporation did.

Judge Gresham, in deciding this case below, said: "If Hapgood & Co. had any right to the invention by virtue of the terms of the defendant's contract of employment, it was a mere naked license to make and sell the patented improvement as a part of their business. This right, if it existed, being a mere personal one, was not transferable, and it was extinguished with the dissolution of the corporation."

So far as the prayer of the trustees is concerned, this court has answered it by saying: "An instrument of license is not one which will carry the right conferred to any one but the licensee personally, unless there are express words to show an intent to extend the right to an executor, administrator, or assignee, voluntary or involuntary."

Oliver v. Rumford Chem. Works, 109 U. S. 75 [14 Am. & Eng. 532.]

According to the rule just quoted, and that announced in *Troy Iron & Nail Factory v. Corning*, 14 How. 193 [5 Am.

Opinion of the court.

& Eng. 375,] Hapgood & Co. had no assignable interest in the invention or patent.

We respectfully submit that the decree should be affirmed and the appeal dismissed with costs.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity brought in the Circuit Court of the United States for the District of Indiana, by Charles H. Hapgood, James H. Hesse, and John Packer, trustees of Hapgood & Company, a dissolved Missouri corporation, and the Hapgood Plow Company, an Illinois corporation, against Horace L. Hewitt. The main object of the suit is to obtain from Hewitt the transfer of letters patent granted to him for an invention. The defendant interposed a general demurrer to the bill, for want of equity. The Circuit Court sustained the demurrer and dismissed the bill (*Hapgood v. Hewitt*, 11 Biss. 184,) and the trustees have appealed to this court.

The material allegations of the bill are as follows: The Missouri corporation was in existence from before August 1st, 1873, to January 1st, 1880, when it was dissolved. At the latter date the three trustees constituted its board of directors, and Hapgood was president. By virtue of the laws of Missouri, Hapgood and the other two persons became trustees of the corporation, with power to settle its affairs and recover the debts and property belonging to it. Hapgood was the president of the corporation during its entire existence, and had the control and management of its business. All the officers and employés were under his direction. He had power to hire and discharge all agents and employés of every grade, to determine the classes and kinds of goods that should be manufactured, and the general way in which the business should be conducted. The corporation employed a large number of manual laborers, and various employés of higher grades, among them a su-

Opinion of the court.

perintendent, a secretary, a foreman, and a traveling salesman, all of whom had charge of different departments, but were under the control and direction of the president as chief executive officer. The duties of the superintendent were to have general charge of the manufacturing department, subject to the discretion of the president, and to devise and get up such new devices, arrangements and improvements in the plows manufactured as should adapt them to the market, and as should be needed from time to time to suit the wants of customers. Shortly before August 1st, 1873, Hewitt represented to the corporation that he was a man of large experience in mechanical pursuits; that he had been for several years immediately preceding engaged with Avery & Sons, plow manufacturers in Louisville, and had been since 1868, familiar with the manufacturing of plows and agricultural implements; that he had been instrumental in devising and getting up the best plows manufactured by Avery & Sons; that the most valuable improvements in the plows manufactured by them had been devised by him and adopted at his suggestion and instigation; that since 1869 he had given his undivided attention to the manufacture of plows, and understood thoroughly the different kinds of plows in the market, and the classes of plows needed for the trade; and that he could and would give to any manufacturer who should secure his services the benefit of his experience in devising and making improvements in the plows manufactured. In consequence of these representations and relying upon them, the corporation employed Hewitt to devote his time and services to getting up, improving and perfecting plows and other goods, and to introducing the same; and, that he might be more fully identified with the corporation, he purchased one share of its stock, and was elected vice-president. At some time, in 1874, Hewitt increased his interest in the company by purchasing one-half of the shares owned by the president. As a part of the same transaction, it was agreed between Hewitt

Opinion of the court.

and the corporation that from that date Hewitt should fill the position of superintendent of the manufacturing department, and as such, not only exercise a general supervision over that department, subject to the president, but also devote his time and services to devising improvements in, and getting up and perfecting, plows adapted to the general trade of the corporation. He accepted the position and held it until the fall of 1877, when his connection with the corporation ceased. He agreed, in such new position, to use his best efforts, and devote his knowledge and skill, in devising and making improvements in the plows manufactured by the corporation, and in getting up and perfecting plows and other agricultural implements adapted to its trade. In view of the expected value of his services in this latter direction, the corporation was induced to pay him, and did pay him, a salary of \$3,000 a year. It was manufacturing a plow known as a sulky or riding plow, so arranged that the plow was carried on a frame supported by wheels, and that the driver of the horses rode on the frame. Down to the year 1876 this sulky-plow had a wooden frame. During that year it was thought desirable by the officers of the corporation that a change should be made by the substitution of an iron frame for the wooden one. The officers, including Hewitt, had frequent conversations during the winter of 1875-6 with reference to such change. In those conversations, and in personal conversations with Hewitt, the president stated that he was anxious to retain in the iron sulky all the essential features of the wooden sulky, so far as was consistent with the use of an iron frame, and suggested other features which he thought it important to adopt in the new plow; and Black, a salesman, urged the importance of having an iron axle of an arched form. As the result of these conversations and deliberations, Hewitt was early in the summer of 1876, directed by the president to proceed at once to devise and build an iron sulky plow according to the suggestions so made; that is, that he should

Opinion of the court.

retain in the new plow all the valuable features of the wooden sulky which the corporation had been manufacturing, should construct the plow of wrought and malleable iron, should adopt the other features suggested by the president and the arch suggested by Black, and should add such additional features as might seem advantageous to him, Hewitt. He was directed to proceed with the work without delay, so that the corporation might be ready to manufacture the new plow for the season of 1877. In accordance with those directions, Hewitt devised and constructed a sulky-plow of wrought and malleable iron, and, after some delays, about the first of April, 1877, produced a plow satisfactory to the president. During all the time he was engaged in devising and constructing the new plow, he was in the employ of the corporation, and drawing a salary of \$3,000 a year. The time during which he was so engaged was the regular working hours in the factory. The men who did the manual labor on the new plow were all employés of, and paid by, the corporation; and all the materials used in its construction were bought and paid for by the corporation. The work, as it progressed, was under the general superintendence of Hewitt, but the work in the respective departments was also under the special superintendence of the respective foremen of those departments, who were also paid by the corporation. During the whole time of the construction of the plow, it was understood by all the parties engaged therein, and by those at whose instance its construction was commenced, that it was being devised and constructed for the use and benefit of the corporation, and as a model for the future construction of sulky-plows by it. After the plow was completed, and had been accepted by the president as satisfactory, the latter directed Hewitt to go to Chicago and have the necessary malleable castings made for the construction of plows after the model. Hewitt did so, obtaining at Chicago castings, mold, and other things necessary for the future build-

Opinion of the court.

ing of plows after the model. During the time so spent, he was drawing his regular salary ; and all his expenses, as well as the price of the models, castings, and other things obtained by him, were paid by the corporation. During the time Hewitt remained in its employ, he never made any claim of property in any of the devices and improvements made or suggested by him in the new plow, and never stated or claimed that he was entitled to a patent on any of said improvements, or that he had any rights adverse to the corporation in any of said improvements or devices, and never, during the term of his employment, asserted any right to a patent in his own name for such improvements or devices, or any of them. After his connection with the corporation had ceased, and after he had made an arrangement with the president, whereby the latter bought back all his (Hewitt's) stock in the corporation, and after the corporation had been for many months, with the knowledge of Hewitt, engaged in the manufacture of such plows, Hewitt, on January 14th, 1878, applied for a patent on the improvements in the plow, and on the 26th of March, 1878, a patent was granted to him, covering certain parts of the plow, being devices which had been theretofore used by the corporation with his knowledge and consent. After this patent was issued he for the first time claimed, as he has since claimed, that he had and has an exclusive right to manufacture such parts of the plow as are covered by the patent, and has threatened to enforce his rights under the patent as against the corporation, its representatives, successors, and assigns, and to hold them liable in damages for any infringement of the same.

The bill also alleges that, in devising and constructing the plow, Hewitt was only performing his duty as an employé of the corporation, and carrying out his contract with it ; that he was doing only what he was hired and paid to do ; that the result of his labors belonged to the corporation ; that it became, in equity and good conscience, the

Opinion of the court.

true and rightful owner of the right to manufacture the plow ; that, if there is any part thereof which is patentable, the patent belonged to the corporation as equitable assignee of Hewitt ; and that he was and is bound, in equity and good conscience, to make an assignment of the patent to the corporation or to its trustees.

The bill also alleges that upon the dissolution of the corporation of Hapgood & Company, the stockholders thereof organized another corporation, under the laws of Illinois, under the name of the Hapgood Plow Company, one of the plaintiffs ; that the Hapgood Plow Company succeeded to the business of the prior corporation and became, by assignment from it, the owner of all the latter's assets, whether legal or equitable, including the rights in the patent issued to Hewitt, which such prior corporation had or was entitled to, whether legal or equitable, and its right to manufacture a sulky-plow in accordance with the model plow made by Hewitt, including all the devices covered or claimed to be covered by the patent ; and that all the rights in the premises which the prior corporation had have been fully transferred to and vested in the new corporation. The bill then alleges a refusal by Hewitt to assign the patent to the plaintiffs, and that he claims to hold it adversely to them.

The prayer of the bill is for a decree directing the defendant to make an assignment of the patent, or of such interest as he may have therein, and of all his rights thereunder, to the Hapgood Plow Company, assignee of Hapgood & Company, or to the trustees of Hapgood & Company, in trust for the Hapgood Plow Company, vesting the title to the patent, or to the defendant's rights thereunder, in the Hapgood Plow Company, or in said trustees in trust for that corporation ; and that he be enjoined and restrained from maintaining any action at law or in equity for any infringement of the patent by Hapgood & Company, or for the use by that corporation of any of the devices or improvements covered by the patent.

Opinion of the court.

The decision of the Circuit Court (11 Biss. 184) was placed on the ground (1) that Hewitt was not expressly required, by his contract, to exercise his inventive faculties for the benefit of his employer, and there was nothing in the bill from which it could be fairly inferred that he was required or expected to do so ; (2) that whatever right the employer had to the invention by the terms of Hewitt's contract of employment was a naked license to make and sell the patented improvement as a part of its business, which right, if it existed, was a mere personal one, and not transferable, and was extinguished with the dissolution of the corporation.

We are of opinion that the views taken of the case by the Circuit Court were correct. There is nothing set forth in the bill, as to any agreement between the corporation and Hewitt, that the former was to have the title to his inventions or to any patent that he might obtain for them. The utmost that can be made out of the allegations is that the corporation was to have a license or right to use the inventions in making plows. It is not averred that anything passed between the parties as to a patent. We are not referred to any case which sustains the view, that, on such facts as are alleged in the bill, the title to the invention or to a patent for it passed. In *McClurg v. Kingsland*, 1 How. 202 [4 Am. & Eng. 382,] the facts were in some respects like those in the present case, but the decision only went to the point that the facts justified the presumption of a license to the employer to use the invention, as a defence by him to a suit for the infringement of the patent taken out by the employé.

The Circuit Court cases referred to do not support the plaintiff's suit. In *Continental Windmill Co. v. Empire Windmill Co.*, 8 Blatch. 295, there was an agreement that the employé should receive \$500 for any patentable improvement he might make. In *Whiting v. Graves*, 3 Ban. & Ard. 222, it was held that an employment to invent machinery

Opinion of the court.

for use in a particular factory would operate as a license to the employer to use the machinery invented, but would not confer on the employer any legal title to the invention or to a patent for it. In *Wilkins v. Spafford*, 3 Ban. & Ard. 274, the contract was that the employer should have the exclusive benefit of the inventive faculties of the employé and of such inventions as he should make during the term of service.

Whatever license resulted to the Missouri corporation, from the facts of the case, to use the invention, was one confined to that corporation, and not assignable by it. *Troy Iron & Nail Factory v. Corning*, 14 How. 193 [5 Am. & Eng. 375 ;] *Oliver v. Rumford Chemical Works*, 109 U. S. 75 [14 Am. & Eng. 532.] The Missouri corporation was dissolved. Its stockholders organized a new corporation under the laws of Illinois, which may naturally have succeeded to the business of the prior corporation, but the express averment of the bill is that it took by assignment the rights it claims in this suit. Those rights, so far as any title to the invention or patent is concerned, never existed in the assignor. As to any implied license to the assignor, it could not pass to the assignee.

As to so much of the prayer of the bill as asks that Hewitt be enjoined from maintaining any action at law or in equity for any alleged infringement of the patent by the prior corporation, or for its use of any of the devices or improvements covered by the patent, which is all there is left of the prayer of the bill, any suit to be brought would not be a suit against the corporation, for it is dissolved ; and could not be a suit in equity against its trustees, for they are not alleged to be using the invention. It could only be a suit at law against the trustees or stockholders of the old corporation, for infringement by it while it existed. The theory of the bill is that there is a perfect defence to such a suit. In such a case a court of equity, certainly a Circuit Court of the United States, will not interfere to enjoin even a

Notes and citations.

pending suit at law, much less the bringing of one in the future. *Grand Chute v. Winegar*, 15 Wall. 373; 1 High on Injunctions, §§ 89-93, and cases there cited.

Decree affirmed.

119 U. S. 234.

Notes:

1. Limitation of employer's right to the invention under contract with inventor :

Appleton v. Bacon, 2 Black, 699 [7 Am. & Eng. 151 ;]
and see

United States v. Burns (Government employé,) 12 Wall.
246 [8 Am. & Eng. 458.]

United States v. Palmer, 128 U. S. 262.

2. Implied license from employé to employer :

McClurg v. Kingsland, 1 How. 202 [4 Am. & Eng. 382.]

Use by employer with inventor's consent defeats the patent :
Worley v. Loker Tobacco Co., 104 U. S. 340 [13 Am. &
Eng. 291.]

Relations of employer and employé with regard to origin of
invention :

Collar Co. v. Van Deusen, 23 Wall. 530 [10 Am. & Eng.
156.]

Agawam Co. v. Jordan, 7 Wall. 583 [8 Am. & Eng. 24.]

Notes and citations.

Employer's liability for profits where his contractor infringes :
Elizabeth v. Pavement Co., 97 U. S. 127 [11 Am. & Eng.
514.]

Patent in suit :

No. 201,670. Hewitt, H. L. March 26, 1878. Sulky-Plow.

OTHER SUITS ON SAME PATENT :

Hapgood v. Hewitt, 1882. 11 Biss. 184 ; 11 Fed. Rep. 422 ; 21 O.
G. 1786.

Cited :**IN CIRCUIT COURTS IN:**

Montross v. Mabie, March, 1887. 30 Fed. Rep. 234.
Solomon's Case, June, 1887. 22 Ct. of Claims, 335.
Locke v. Lane & Bodley Co., May, 1888. 35 Fed. Rep. 289.

IN TEXT BOOKS :

Walker on Pats., 2d ed., 1889, pp. 207, 238.

Oct., 1886.]

HAPGOOD v. HEWITT.

425

Syllabus.

ABBIE B. CLARK, EXECUTRIX, AND RUFUS D. CHASE,
EXECUTOR OF ANDREW J. CLARK, Deceased, ET AL.,
APPELLANTS, v. GEORGE H. WOOSTER.*

119 U. S. 322-326. Oct. Term, 1886.

[Bk. 30, L. ed. 392 ; 37 O. G. 1477.]

Affirming Wooster v. Clark, 21 O. G. 264.

Argued November 8, 9, 1886. Decided December 6, 1886.

Patent about to expire. Equity jurisdiction. Injunction. Original patent in evidence in suit on reissue. License fee. Measure of damages.

1. Where a bill in equity for the infringement of a patent and praying for an injunction was filed fifteen days before the expiration of the patent, and in season, by the rules of the proper court, to have obtained a preliminary injunction, the court had jurisdiction of the case, and could retain the bill if in its discretion it saw fit to do so. (p. 434.)
2. If, however, by the course of the court where the suit was brought, no preliminary injunction could be obtained, the bill should be dismissed for want of jurisdiction. (p. 435.)
3. The jurisdiction of the court having attached, although the principal grounds of relief expired with the patent, if the general allegations of the bill covered other grounds of relief, the jurisdiction remained. Even if the bill had no such general allegations, if it was for equitable relief when the suit was commenced, the mere fact that the ground for such relief expired with the patent would not take away the jurisdiction and preclude the court from the incidental relief which belongs to cases of that sort. *Root v. Railway Company*, 105 U. S. 189 [13 Am. & Eng. 556,] is not inconsistent with the views expressed in this case. (p. 435.)
4. Where the bill alleges equitable grounds for relief—as, for instance, fraud—and the allegations are not sustained by the proofs, the bill will be dismissed *in toto*, both as to the princi-

* See Explanation of Notes, page III.

Argument of counsel.

pal relief sought as well as to the relief incidental thereto. (p. 435.)

5. Where the court below had jurisdiction at the commencement of the suit, even upon a narrow ground, if the defendant did not ask for a dismissal for want of jurisdiction, this Court will be reluctant, if it had the power, after the case had been tried and determined on the merits, to reverse the decree upon appeal on the ground of lack of jurisdiction in the lower court. (p. 436.)
6. In a suit upon a reissued patent the allegations of invalidity of the reissue must be proved, and the original patent is material evidence for the purpose of comparison with the reissue. (p. 436.)
7. Established license-fees are the best measure of damages for infringement of patents, and special damages beyond these are more properly the subjects of allowance by the Court under the provisions of the statute. (p. 436.)

[Citations in the opinion of the court:]

Thomson v. Wooster, 114 U. S. 104 [p. 28 *ante*.] pp. 433, 435, 436.

Root v. Railway Co., 105 U. S. 189 [13 Am. & Eng. 556.] p. 435.

Cotton-Tie Co. v. Simmons, 106 U. S. 89 [14 Am. & Eng. 159.] p. 435.

Lake Shore & M. S. R. Co. v. Car-Brake Shoe Co., 110 U. S. 229 [15 Am. & Eng. 124.] p. 435.

Consolidated Valve Co. v. Crosby Valve Co., 113 U. S. 157 [15 Am. & Eng. 460.] p. 435.

Appeal from the Circuit Court of the United States for the Southern District of New York.

The case is stated by the court.

Messrs. Frederick P. Fish and T. L. Livermore, for appellants :

The Supreme Court, in the case of Root v. Railway Co., 105 U. S. 189 [13 Am. & Eng. 556,] have affirmed that the right to proceed in equity for the infringement of letters patent depends not upon anything peculiar to the subject matter of the litigation, but upon general principles of equity.

See also, Hayward v. Andrews, 106 U. S. 672 [14 Am. & Eng. 276.]

Argument of counsel.

It is submitted that in patent causes, as in other branches of equity, the plaintiff's right to come into equity because of his prayer for an injunction; depends upon whether he has shown in his bill that his cause of action and the situation of the parties are such that he does not have a plain, adequate and complete remedy at law, but needs the special and peculiar remedies to be obtained only in a court of equity.

It is well settled that the ground of the jurisdiction of a court of equity to grant injunctions against torts is not based upon the fact that the plaintiff has suffered damage in the past, for the courts of law will in that case afford him full redress by way of damages.

“The jurisdiction, in all cases in which an injunction is prayed for to restrain a tort, is founded upon the equity of protecting property from irreparable injury, or of protecting the plaintiff against a continuing violation of his rights.”

Kerr on Injunctions, Am. Ed. 1871, pp. 235, 287, 332, and cases there cited.

Fletcher v. Bealey, 28 Ch. Div. 688; *Doherty v. Allman*, 3 App. Cas. H. of L. 709; *Pulteny v. Shelton*, 5 Ves. 260, *note*; *Lathrop v. Marsh*, 5 Ves. 259; *Thwort v. Thwort*, 16 Ves. 128; *Hawley v. Clowes*, 2 John. Ch. 122; *Watson v. Hunter*, 5 John. Ch. 169; *Duvall v. Waters*, 1 Bland (Md.) 577; *Jesus College v. Bloom*, 3 Atk. 262; *Smith v. Cook*, 3 Atk. 381; *Livingston v. Livingston*, 6 John. Ch. 497; *Clowes v. Beck*, 13 Beav. 347; *Hodgson v. Duce*, 2 Jur. N. S. 1014; *Parker v. Cotton & Woolen Co.*, 2 Black. 545; *Bailey v. Taylor*, 1 R. & M. 73.

The only decided cases found, upon a careful examination of the reports, in which it has ever been intimated, however, that there was a special and peculiar equity under the statute of the United States, giving to causes based upon the infringement of letters patent a standing in the courts of equity of a different character from other cognate cases of torts or trespass, are those circuit cases distinctly overruled in *Root v. Railway Co.* [13 Am. & Eng. 556,] in which it

Argument of counsel.

had been held that the court could take jurisdiction in suits on expired patents, where there were no special equities to confer jurisdiction.

In all other cases it has been assumed that the sole ground for the interference in a court of equity by injunction, in patent cases, was the same as in other cases.

Neilson v. Thompson, 1 Web. Pat. Cas. 286 [3 Am. & Eng. 151 ;] Rumford Chem. Works v. Hecker, 2 Ban. and Ard. 386 ; Jenkins v. Greenwald, 2 Fish. 38.

It is submitted that with the exception of the cases overruled in Root v. Railway, no cases can be found in which it is decided that a patentee is entitled to an injunction except upon the ground that he needs it to protect him against a continuing infringement which will cause him irreparable damage. If this is the law, it follows that a court of equity will not take jurisdiction in any case in which the bill does not contain the necessary allegations to lay the foundation for the granting by the court of an injunction for which the bill prays.

Story, Eq. Pl. § 23 ; Parker v. Cotton & Woolen Co., 2 Black. 545.

In bills brought for an injunction against waste, a court will not interfere where the waste is trivial, nor will such an injunction be granted where the person against whom such relief is sought has stopped committing waste since the filing of the bill.

Parker v. Cotton & Woolen Co., 2 Black. 551 ; Brace v. Taylor, 2 Atk. 253 ; Barry v. Barry, 1 J. & W. 653 ; Lambert v. Lambert, 2 Ir. Eq. 210 ; Doran v. Carroll, 11 Ir. Ch. 283.

On the same principle, a bill for an injunction will not lie to prevent a nuisance or a trespass which is of small moment.

Kerr on Injunctions, Am. Ed. 1871, pp. 353, 363, and cases there cited.

It is submitted that these cases are authority for holding that a court in equity has no jurisdiction of a patent cause,

Argument of counsel.

where the prospective damage, if any is alleged, must necessarily be slight as would have been the continuance of infringement by the defendants in the present case for fifteen days.

When, however, as in the present case, there is no allegation of continuing infringement, no allegation that the defendants threaten or intend to continue their infringement, or that if they do continue their infringement they will cause the complainant injury of such a character that he cannot be compensated for it by damages, and not even an allegation to the effect that the infringement of the past was of such a character so to cause irreparable damage from which it might possibly be inferred that a continuance of the infringement, if alleged, would in like manner seriously affect the plaintiff's interests, it is hard to see any theory upon which the bill can be sustained, which will not be a violation of the fundamental principles upon which courts of equity have always based their jurisdiction to grant injunctions in cases of tort.

In the present case, the proofs, when taken, do not in any degree tend to show that it was possible for the complainant to have made in his bill those allegations which alone confer jurisdiction upon a court of equity, or that he did not have a plain, adequate remedy at law. The single act of infringement upon which the plaintiff based his *prima facie* case consisted of the sale in the defendants' store to the plaintiff's counsel of a single folding guide or binder, on the seventh day of April, 1879, five months and thirteen days before the bill was brought. If the plaintiff was in danger of suffering irreparable damage from the defendants' acts, or if the defendants were in fact continuing their infringement after the time of this single sale, it was the complainant's duty to have brought his bill long prior to its actual date of filing.

It is an elementary rule in pleading that everything which it is necessary for the complainant to prove, to sustain his case, must be stated in the bill of complaint. Story, Eq. Pl. § 23.

Argument of counsel.

This being the case, there is no escape from the conclusion that this complainant, having alleged in substance that after a lapse of fourteen years, he surrendered his original patent to amend his claim so as to make his patent valid, and therefore to obtain rights against the public which his original patent did not claim, must fail to maintain his case, because if an excuse for the extraordinary delay of fourteen years is possible, he has not alleged such an excuse.

The bill of complaint must exclude the presumption of laches which arises from the lapse of time in bringing suit, and for this reason the defect can be taken advantage of by demurrer.

National Bank v. Carpenter, 101 U. S. 567. See also, Maxwell v. Kennedy, 8 How. 210; Walker v. Jeffreys, 1 Hare, 348; Tatam v. Williams, 3 Hare, 347; B. & M. Railroad v. Bartlett, 10 Gray, 384.

It is submitted that the master erred in finding that there was an established license fee which should be the measure of damages in this case, and that he should have awarded nominal damages only against defendants.

Mr. Frederic H. Betts, for appellee :

There can be no doubt, under the circumstances of this case, that the court of equity had jurisdiction.

The bill distinctly and repeatedly alleges a *present* and *continuing* wrong, and one from which the defendants have "refused" to desist.

The rule seems to be well settled that an infringement *once* committed is sufficient to entitle a patentee to an injunction, even though the infringer *promises not* to repeat the offence.

Jenkins v. Greenwald, 2 Fish. 38; Potter v. Crowell, 2 Fish. 112; Losh v. Hague, 1 Web. Pat. Cas. 197 [2 Am. & Eng. 477;] Woodworth v. Wilson, 4 How. 712 [4 Am. & Eng. 542.]

How much more is this remedy appropriate when it is alleged that defendant has *refused* to desist.

Argument of counsel.

In *American Cotton-Tie Co. v. Simmons*, 106 U. S. 89 [14 Am. & Eng. 159 ;] and in *Lake Shore &c. R. R. v. Car-Brake Shoe Co.*, 110 U. S. 229 [15 Am. & Eng. 124,] and in *Consolidated Valve Co. v. Crosby Valve Co.*, 113 U. S. 157 [15 Am. & Eng. 460,] this court entertained suits in equity and granted decrees for accounts, though the patents had long expired.

In the second named case the bill was filed "less than four months before the expiration of the 'patent' and the answer was only filed 'two days before the patent expired.' "

In *Thomson v. Wooster*, 114 U. S. 104 [p. 28 *ante*,] this court affirmed a decree, which, on the present patent, granted an injunction, and which was filed August 2, 1879, only two months and three days before the expiration.

The Circuit Courts have followed the same practice.

Gottfried v. Moerlein, 14 Fed. Rep. 170 ; *M'Millan v. St. Louis Co.*, 18 Fed. Rep. 261 ; *N. Y. Belting Co. v. Magowan*, 27 Fed. Rep. 111 ; *Adams v. Bridgewater Iron Co.*, 26 Fed. Rep. 325 ; *Dick v. Struthers*, 25 Fed. Rep. 103 ; *Toledo Mower & Reaper Co. v. Johnson Harvester Co.*, 23 Blatch. 132 ; *Rumford Chem. Works v. Vice*, 14 Blatch. 179 ; *Adams v. Howard*, 19 Fed. Rep. 317 ; *Sayles v. Dubuque Co.*, 5 Dill. 562 ; *Jones v. Barker*, 11 Fed. Rep. 597 ; *Reay v. Raynor*, 19 Fed. Rep. 308.

In the present case the proofs show that the complainant's conduct in coming into equity was fully justified ; and persuasive evidence is found tending to show that any remedy which he could obtain at law would have been inadequate, and that the interposition of equity was quite essential to his protection, and to avoid multiplicity of suits.

The validity of the reissue cannot be attacked. The suit was brought upon the reissued patent named in the bill, the original patent was not offered in evidence and is not on the record.

This assignment of error needs little attention. The bill in this case is framed in the identical words to that already before this court in *Thomson v. Wooster*.

Opinion of the court.

This court has so often ruled that the validity of a reissue cannot be attacked, on account of alleged variation from the original patent, unless the original patent be offered in evidence, that the subject needs no discussion here.

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.]

It appears that a number of responsible companies took licenses, made returns, and regularly paid license fees for precisely the same form of folding guides as those which the defendants disposed of in infringing the patent. This is ample proof that the complainant had an "established" license fee which becomes a fair measure of his damages from the disposition by the defendants of precisely the same thing.

Mr. Justice BRADLEY delivered the opinion of the court :

This is a suit on a patent, brought by Wooster, the appellee, against the persons composing the firm of Johnson, Clark & Co., of New York, to restrain them from infringing the patent, and to recover profits and damages. The bill was filed on the 20th of December, 1879, and the patent expired fifteen days afterwards. The patent was for folding-guides used on sewing-machines, and is the same that was involved in the case of Thomson v. Wooster, 114 U. S. 104 [p. 28 *ante.*] It was granted to one Douglas in October, 1858, for a period of fourteen years, was extended in October, 1872, for seven years longer, and was then, in the same month, surrendered and reissued. The bill does not specify the particular ground on which the reissued patent was granted ; and although the answer avers that it was unlawfully granted, that the original was surrendered for the purpose of claiming more and other things than were described and claimed in it, and that the reissued patent is not for the same invention for which the original was granted, it does not set out the original, nor was the original put in evidence in the cause, and no evidence was offered to substantiate the allegations of the answer. The complainant produced

Opinion of the court.

the reissued patent in evidence and proved infringement. The defendant adduced evidence before the examiner, but out of time, and it was ruled out by the court. A decree was made establishing the patent, and the infringement thereof by the defendants, and referring it to a master to take and state an account of profits, and to assess damages, and the defendants were ordered to produce their books, papers, and devices used, so far as related to the matter in issue. Upon this reference, the parties entered into a stipulation before the master, by which the defendants admitted that they had purchased and disposed of 15,000 folding-guides covered by the decree; and in consideration thereof the complainant waived all further testimony as to profits received by the defendants therefrom, and agreed to rely on proof of damages in place of profits. The complainant adduced evidence to show that he had an established license fee of ten cents for each folding-guide purchased or disposed of, and had granted licenses at that rate to divers sewing-machine companies. The master, being satisfied with this evidence, reported the damages at \$1,500. The defendants filed a number of exceptions to the report, none of which were sustained, and a decree was entered for the amount of damages reported. The defendants thereupon appealed.

The points taken by the appellants are:

First. That the court below, sitting as a court of equity, had no jurisdiction of the case, because the complainant had a plain and adequate remedy at law.

Second. That the reissue of the patent was illegal by reason of laches in applying for it.

Third. That the court erred in finding that the measure of damages was an established license fee, and that such license fee was proved.

As to the first point, the bill does not show any special ground for equitable relief, except the prayer for an injunction. To this the complainant was entitled, even for the short time the patent had to run, unless the court had

Opinion of the court.

deemed it improper to grant it. If, by the course of the court, no injunction could have been obtained in that time, the bill could very properly have been dismissed, and ought to have been. But by the rules of the court in which the suit was brought, only four days' notice of application for an injunction was required. Whether one was applied for does not appear. But the court had jurisdiction of the case, and could retain the bill, if in its discretion it saw fit to do so, which it did. It might have dismissed the bill, if it had deemed it inexpedient to grant an injunction; but that was a matter in its own sound discretion, and with that discretion it is not our province to interfere, unless it was exercised in a manner clearly illegal. We see no illegality in the manner of its exercise in this case. The jurisdiction had attached, and although, after it attached, the principal ground for issuing an injunction may have ceased to exist by the expiration of the patent, yet there might be other grounds for the writ arising from the possession by the defendants of folding-guides illegally made or procured whilst the patent was in force. The general allegations of the bill were sufficiently comprehensive to meet such a case. But even without that, if the case was one for equitable relief when the suit was instituted, the mere fact that the ground for such relief expired by the expiration of the patent would not take away the jurisdiction, and preclude the court from proceeding to grant the incidental relief which belongs to cases of that sort. This has often been done in patent causes, and a large number of cases may be cited to that effect; and there is nothing in the decision in *Root v. Railway Co.*, 105 U. S. 189 [13 Am. & Eng. 556] to the contrary. *American Cotton-Tie Co. v. Simmons*, 106 U. S. 89 [14 Am. & Eng. 159;] *Lake Shore & M. S. R. Co. v. Car-Brake Co.*, 110 U. S. 229 [15 Am. & Eng. 124;] *Consolidated Valve Co. v. Crosby Valve Co.*, 113 U. S. 157 [15 Am. & Eng. 460;] *Thomson v. Wooster*, 114 U. S. 104 [p. 28 *ante.*] It is true that where a party alleges equitable ground for relief and

Opinion of the court.

the allegations are not sustained, as where a bill is founded on an allegation of fraud, which is not maintained by the proofs, the bill will be dismissed *in toto*, both as to the relief sought against the alleged fraud, and that which is sought as incidental thereto.

The point insisted on, that the bill contained no charge of continued infringement, or of infringement at the time of commencing the suit, if it were material, is not sustained by the fact. The bill does contain such a charge.

As the court had jurisdiction at the inception of the suit, even though upon a narrow ground, yet, as the defendants did not ask the dismissal of the bill on the ground of want of jurisdiction, we should be very reluctant, if we had the power, now, on an appeal, after the case has been tried and determined, to reverse the decree.

The second point raised was substantially disposed of in the case of Thomson v. Wooster, *qua supra*. The allegations in the present bill are the same as they were in that case. Neither the bill nor the proofs show anything from which the court can infer that the reissue was illegally granted; and the allegations of the answer are unsupported by evidence. The reissued patent itself made a *prima facie* case for the complainant. The allegations of the answer, that it was issued for the mere purpose of expanding the claim of the original, and that it was for another and different invention, should have been proved. But we have no evidence on the subject, not even the original patent with which to compare the reissue. This point, therefore, is wholly without foundation.

The third point, as to the measure of damages and the want of proof thereof, is equally untenable. It is a general rule in patent causes, that established license fees are the best measure of damages that can be used. There may be damages beyond this, such as the expense and trouble the plaintiff has been put to by the defendant, and any special inconvenience he has suffered from the wrongful acts of the

.Notes and citations.

defendant; but these are more properly the subjects of allowance by the court under the authority given to it to increase the damages.

As to the sufficiency of the proof, we see no occasion to disturb the conclusion reached by the master on this point. The complainant proved several instances of licenses given by him to large sewing-machine companies, the fees on which were regularly paid, and corresponded with the rate allowed by the master. We think that the defendants have no occasion to complain of the amount awarded.

The decree of the Circuit Court is affirmed.

119 U. S. 326.

Notes:

1. Expired patent—want of jurisdiction :

Bourne v. Goodyear, 9 Wall. 812 [8 Am. & Eng. 209.]

Root v. Railway, 105 U. S. 189 [13 Am. & Eng. 556.]

Expiration of patent cannot defeat jurisdiction—if alive when bill was filed :

Beedle v. Bennet, 122 U. S. 71.

6. Original patent in evidence on the question of identity of the re-issue :

Eureka Co. v. Bailey Co., 11 Wall. 488 [8 Am. & Eng. 280.]

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290.]

Russell v. Dodge, 93 U. S. 460 [10 Am. & Eng. 495.]

Smith v. Goodyear D. V. Co., 93 U. S. 486 [11 Am. & Eng. 1.]

Bates v. Coe, 98 U. S. 31 [12 Am. & Eng. 150.]

Ball v. Langles, 102 U. S. 128 [12 Am. & Eng. 508.]

Notes and citations.

7. License-fee as measure of damages :

Hogg v. Emerson, 11 How. 587 [5 Am. & Eng. 279.]
Seymour v. McCormick, 16 How. 480 [6 Am. & Eng. 2
New York v. Ransom, 23 How. 487 [7 Am. & Eng. 88.]
Philp v. Nock, 17 Wall. 460 [9 Am. & Eng. 84.]
Packet Co. v. Sickles, 19 Wall. 611 [9 Am. & Eng. 280.]
Burdell v. Denig, 92 U. S. 716 [10 Am. & Eng. 420.]
Root v. Railway, 105 U. S. 189 [13 Am. & Eng. 556.]
(Royalty) Birdsall v. Coolidge, 93 U. S. 64 [10 Am. &
Eng. 445.]
Rude v. Westcott, 130 U. S. 152.
Cornely v. Marckwald, 131 U. S. 159.

Patent in suit :

No. 21,659. Douglas, A. October 5, 1858. Reissue, No.
5,180, December 10, 1872. Sewing Machine.

OTHER SUITS ON SAME PATENT :

Wooster v. Taylor, 1874. 12 Blatch. 384; 1 Ban. & Ard. 594; 8 O.
G. 644.
Wooster v. Sidenberg, 1875. 13 Blatch. 88; 2 Ban. & Ard. 91; 10
O. G. 244.
Thomson v. Wooster, 1885. 114 U. S. 104 [p. 28 *ante.*]
Wooster v. Thornton, 1886. 26 Fed. Rep. 271.

Cited :**IN SUPREME COURT IN :**

Beedle v. Bennet, 1887. 122 U. S. 71; Bk. 30 L. ed. 1074.

Notes and citations.

IN CIRCUIT COURTS IN:

Creamer v. Bower, February, 1887. 30 Fed. Rep. 185.

Reay v. Berlin & Jones Envelope Co., March, 1887. 30 Fed. Rep. 448.

Kittle v. De Graff, May, 1887. 30 Fed. Rep. 689.

Bates v. St. Johnsbury & L. C. R. Co., October, 1887. 32 Fed. Rep. 628.

Kittle v. Rogers, November, 1887. 33 Fed. Rep. 49.

Cary v. Lovell Mnfg. Co., January, 1889. 37 Fed. Rep. 654.

Gilmore v. Anderson, May, 1889. 38 Fed. Rep. 846.

IN TEXT BOOKS:

Walker on Pats., 2d ed., 1889. pp. 172, 374, 413, 441.

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Syllabus.

CLARK POMACE HOLDER COMPANY, APPELLANT,
v. WILLIAM H. FERGUSON.*

119 U. S. 335-338. Oct. Term, 1886.

[Bk. 30, L. ed. 406 ; 37 O. G. 1479.]

Affirming *Ibid*, 21 Blatch. 376.

Argued November 19, 1886. Decided December 6, 1886.

Particular patent. Absence of invention. Mechanical skill.

1. Letters patent, No. 187,100, granted to John Clark, February 6, 1877, for "Improvements in Cheese-Formers for Cider-Presses," construed and *held*, in view of the fact that the rack for the pomace was old, a cloth to envelope the pomace on the rack was old, and, in combination with these parts, an inclosure to confine the pomace with a uniform depth was old, it did not involve invention, but only ordinary mechanical skill and judgment, to employ a guide-frame smaller than the rack to confine the pomace. (p. 444.)

[Citations in the opinion of the court :]

- Clark Pomace Holder Co. v. Ferguson, 21 Blatch. 376. p. 444.
Vinton v. Hamilton, 104 U. S. 485 [13 Am. & Eng. 394.] p. 447.
Hall v. MacNeale, 107 U. S. 90 [14 Am. & Eng. 291.] p. 447.
Atlantic Works v. Brady, 107 U. S. 192 [14 Am. & Eng. 380.] p. 447.
Slawson v. Grand Street Railroad Co. 107 U. S. 649 [14 Am. & Eng. 475.] p. 447.
King v. Gallun, 107 U. S. 99 [14 Am. & Eng. 559.] p. 447.
Double-Pointed Tack Co. v. Two Rivers Mnfg. Co., 109 U. S. 117 [14 Am. & Eng. 571.] p. 447.
Estey v. Burdett, 109 U. S. 633 [15 Am. & Eng. 32.] p. 447.
Bussey v. Excelsior Mnfg. Co., 110 U. S. 131 [15 Am. & Eng. 77.] p. 447.
Pennsylvania Railroad Co. v. Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148.] p. 447.
Phillips v. Detroit, 111 U. S. 604 [15 Am. & Eng. 269.] p. 447.
Morris v. McMillin, 112 U. S. 244 [15 Am. & Eng. 310.] p. 447.
Hollister v. Benedict Mnfg. Co., 113 U. S. 59 [15 Am. & Eng. 417.] p. 447.
Thompson v. Boisselier, 114 U. S. 1 [15 Am. & Eng. 549.] p. 447.
Stephenson v. Brooklyn Railway Co. [p. 63 *ante*.] p. 447.

* See Explanation of Notes, page III.

Argument of counsel.

Yale Lock Co. v. Greenleaf, 117 U. S. 554 [p. 303 *ante.*] p. 448.

Gardner v. Herz, 118 U. S. 180 [p. 368 *ante.*] p. 448.

Appeal from the Circuit Court of the United States for the Northern District of New York.

The case is stated by the court.

Mr. Walter E. Ward, for appellant :

Clark did all that is necessary to constitute one an inventor. He invented a new "guide frame," a new "extended pomace rack," and an entirely new combination of the "racks," "form," and "cloths," which operated in a manner never before known. His invention was new and useful and has been of great benefit to the public. He was clearly entitled to a patent.

Winans v. Denmead, 15 How. 341 [6 Am. & Eng. 107;] Davis v. Palmer, 2 Brock. 310; Mabie v. Haskell, 2 Cliff. 510; Aiken v. Dolan, 3 Fisher, 204; Consolidated Valve Co. v. Crosby Valve Co., 113 U. S. 157 [15 Am. & Eng. 460;] Hollister v. Benedict, 113 U. S. 59 [15 Am. & Eng. 417;] N. Y. Belting & Packing Co., v. Magowan, 27 Fed. Rep. 362; Asmus v. Alden, 27 Fed. Rep. 684; Smith v. Goodyear etc. Co., 93 U. S. 486 [11 Am. & Eng. 1;] Washburn & Moen Mnfg. Co. v. Haish, 4 Fed. Rep. 907; Eppinger v. Richey, 14 Blatch. 307; Hill v. Biddle, 27 Fed. Rep. 560; Celluloid Mnfg. Co. v. American Zylonite Co., 36 O. G. 1043.

Mr. William H. King, for appellee :

The precise combination and the precise process described and claimed in the patent in suit was known and used two years and more prior to the application for said patent.

We have the positive proof of more than one person publicly and successfully using the improvement in his business prior to the date of the alleged invention by Clark.

The prior knowledge and use by a single person is sufficient.

Coffin v. Ogden, 18 Wall. 120 [9 Am. & Eng. 125;] Bed-

Opinion of the court.

ford *v.* Hunt, 1 Mas. 302; Egbert *v.* Lippmann, 104 U. S. 333 [13 Am. & Eng. 273;] Manning *v.* Glue Co., 23 O. G. 2413 [14 Am. & Eng. 504.]

The use of the various elements claimed in the patent do not constitute a valid combination, but is merely an aggregation or assemblage of parts. Each of the elements acts independently of the others. There is no novelty in the alleged improvement, and the patentee has not invented anything that rises to the dignity of invention.

To constitute a valid combination there must be a new result produced by the combined action of all the component parts. What is the result in this case? It may perhaps be admitted that the guide-frame operates more conveniently than the old devices, but something more than this is necessary to sustain a patent for a combination.

Hailes *v.* Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340;] Pickering *v.* McCullough, 104 U. S. 310 [13 Am. & Eng. 238;] Reckendorfer *v.* Faber, 92 U. S. 347 [10 Am. & Eng. 373;] Packing Co. Cases, 105 U. S. 566 [14 Am. & Eng. 49.]

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity brought in the Circuit Court of the United States for the Northern District of New York, for the infringement of letters patent, No. 187,100, granted to John Clark, February 6th, 1877, for an "improvement in cheese-formers for cider-presses," on an application filed September 11th, 1876. The specification and drawings of the patent are as follows:

"The object I have in view is, in laying up a 'cheese' for the cider-press, where each layer is folded up in a cloth, to secure uniformity of thickness of all the layers in the mass or cheese, and thus secure uniform pressure on its entire area, and to avoid all tendency to break the pomace frames or racks. To this end it consists in the employment of a guide-frame, in combination with extended pomace-racks,

Opinion of the court.

as more fully hereinafter set forth. Figure 1 is a perspective view, showing the manner of laying up a cheese in press. Fig. 2 is a cross section at *xx*. In the drawing, A represents the lower frame-work of a cider-press, on which is laid a bed, B. C is a pomace-rack, which may be rigid, as shown, or flexible, as described in letters patent, No. 148,034, issued to me March 3, 1874. On this rack is laid a guide-frame, D, whose bottom girts are not spaced far enough apart to extend the full length of the rack on which they rest. A cloth, E, large enough to envelope the layer, is then laid on the rack, inside the frame, and opened out to receive the pomace, which is 'struck' level with the girts of the frame, after which the cloth is folded over the leveled pomace, and the frame is lifted off. The next and succeeding racks are in like manner laid on the first, and filled up, and a follower is placed on the upper one, when the cheese is ready to press. Laid up in this way, the several layers are uniform in thickness, and the cheese, in mass, is level on top, and offers a uniform resistance to the pressure, over its entire area, thus assuring the expression of all the juice and precluding all danger of breaking the pomace-racks. If the bed, B, be extended, a cheese may be built upon a board while one is being pressed, and then be slid under the follower when the first one is removed."

The claim is in these words: "The guide-frame, D, in combination with an extended pomace-rack, and a cloth to inclose a layer of pomace therein, substantially as described."

The answer sets up as defences, want of novelty, want of patentability, and public use for more than two years before the application for the patent. After a hearing on proofs, a decree was made adjudging the patent to be invalid and dismissing the bill. The plaintiff has appealed.

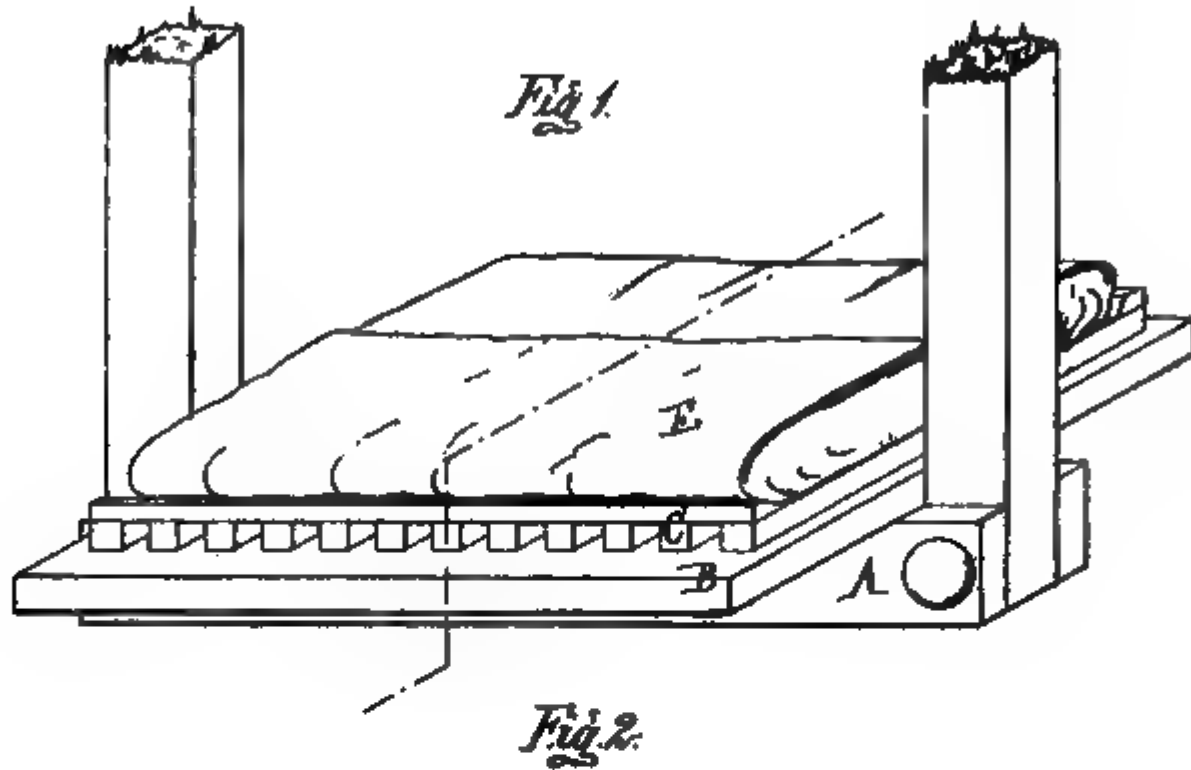
The decision of the Circuit Court (21 Blatch. 376) proceeded on these grounds: 1. Cloths, and also racks, and also guide-frames, having each been used before, the aggregation of them, as described in the patent, was not a valid

J. CLARK.

CHEESE-FORMERS FOR CIDER-PRESSES.

No. 187,100.

Patented Feb. 6, 1877.



Attest
E. Parthel.
Notary Public

Inventor
J. Clark
By Atty
Geo. S. Sprague

Opinion of the court.

combination. 2. The use of the described guide-frame in connection with the racks and cloths, did not involve invention. 3. The precise combination described in the patent was in public use more than two years before the patent was applied for.

Without examining any other question raised in the case, we are of opinion that the patent must be held void on the second ground above mentioned. A rack on which to place the pomace was old, and a cloth to cover the pomace lying on the rack was old, the two being used in connection, and an enclosure was used with them, which enabled the operator to make the pomace of uniform depth on each rack, and prevented the lateral spreading of the pomace. The only point of the invention would seem to be the use of a guide-frame smaller than the rack ; or, in other words, the use of a rack larger than the guide-frame. There was no invention in making the guide-frame or the rack of the desired size. It required only ordinary mechanical skill and judgment. Within the recent cases in this court on the subject the patent must be held void.

Vinton *v.* Hamilton, 104 U. S. 485 [13 Am. & Eng. 394 ;] Hall *v.* MacNeale, 107 U. S. 90 [14 Am. & Eng. 291 ;] Atlantic Works *v.* Brady, 107 U. S. 192 [14 Am. & Eng. 380 ;] Slawson *v.* Grand Street Railroad Co., 107 U. S. 649 [14 Am. & Eng. 475 ;] King *v.* Gallun, 109 U. S. 99 [14 Am. & Eng. 559 ;] Double-Pointed Tack Co. *v.* Two Rivers Manufacturing Co., 109 U. S. 117 [14 Am. & Eng. 571 ;] Estey *v.* Burdett, 109 U. S. 633 [15 Am. & Eng. 32 ;] Bussey *v.* Excelsior Manufacturing Co., 110 U. S. 131 [15 Am. & Eng. 77 ;] Pennsylvania Railroad Co. *v.* Locomotive Truck Co., 110 U. S. 490 [15 Am. & Eng. 148 ;] Phillips *v.* Detroit, 111 U. S. 604 [15 Am. & Eng. 269 ;] Morris *v.* McMillin, 112 U. S. 244 [15 Am. & Eng. 310 ;] Hollister *v.* Benedict Manufacturing Co., 113 U. S. 59 [15 Am. & Eng. 417 ;] Thompson *v.* Boisselier, 114 U. S. 1, 11 [15 Am. & Eng. 549 ;] Stephenson *v.* Brooklyn Railroad Co., 114 U. S. 149 [p. 63 *ante* ;]

Notes and citations.

Yale Lock Manufacturing Co. v. Greenleaf, 117 U. S. 554
[p. 303 *ante* ;] Gardner v. Herz, 118 U. S. 180 [p. 368 *ante*.]
Decree affirmed.

119 U. S. 338.

Notes:

1. Change in size does not involve invention :

Phillips v. Page, 24 How. 161 [7 Am. & Eng. 97.]

Dalton v. Jennings, 93 U. S. 271 [10 Am. & Eng. 459.]

Glue Co. v. Upton, 97 U. S. 3 [11 Am. & Eng. 458.]

Estey v. Burdett, 109 U. S. 633 [15 Am. & Eng. 32.]

Patent in suit:

No. 187,100. Clark, J. February 6, 1877. Cheese-Former
for Cider Press.

OTHER SUITS ON SAME PATENT :

Clark Pomace Holder Co. v. Ferguson, 1883. 21 Blatch. 376 ; 17
Fed. Rep. 79 ; 24 O. G. 1090.

Cited:

IN SUPREME COURT IN :

Dreyfus v. Searle, 1888. 124 U. S. 60; Bk. 31 L. ed. 352.

Hendy v. Golden State & Miners' Iron Works, 1888. 127 U. S.
370 ; Bk. 32 L. ed. 207.

Royer v. Roth, 1889, 132 U. S. 201. .

Hill v. Wooster, 1889, 132 U. S. 693.

Notes and citations.

IN CIRCUIT COURTS IN :

United States Bung Mnfg. Co. v. Independent Bung & Bushing Co., May, 1887. 24 Blatch. 406 ; 31 Fed. Rep. 76.

Cluett v. Claflin, June, 1887. 41 O. G. 1042.

Landesmann v. Jonasson, September, 1887. 32 Fed. Rep. 590.

**Holmes Electric Protective Co. v. Metropolitan Burglar Alarm Co.,
December, 1887. 33 Fed. Rep. 254.**

Brahm v. Ramapo Iron Works, May, 1888. 35 Fed. Rep. 63.

IN TEXT BOOKS :

Walker on Pats., 2d ed., 1889. p. 24.

Syllabus.

ROBERT NEWTON, APPELLANT, v. FURST AND
BRADLEY MANUFACTURING COMPANY, CON-
RAD FURST, ET AL.*

119 U. S. 373-385. Oct. Term, 1886.

[Bk. 30, L. ed. 442 ; 38 O. G. 104.]

Affirming *Ibid*, 11 Biss. 405.

Argued December 3, 1886. Decided December 13, 1886.

*Particular reissued patent. Inadvertence and mistake. Invalid
reissue claim.*

1. The first claim of the original letters patent, No. 58,612, F. S. Davenport, Gang-Plows, which covered only the combination of three specific devices, viz : the lever P, the rod Q, and the brake R, limited in view of the prior state of the art to the specific devices, and *held*, that the friction-band of defendants was not the brake of plaintiff's patent, nor the crank-axle of defendants the hinged-board axle of plaintiffs, although apparently the purpose and mode of operation of these parts were substantially alike in both instances. (p. 464.)
2. The first claim of the reissue, No. 8,986, granted Dec. 2, 1879, more than thirteen years after the date of the original patent, after the defendants had begun to make plows like those complained of, and which claimed the combination of four things —(1) Friction-clutch mechanism; (2) means for engaging and disengaging it with the ground or carrying wheel; (3) a swing axle; (4) a ground or carrying wheel, *held*, to be evidently taken to cover defendants' machine, which did not infringe the first claim of the original patent, and that no inadvertence or mistake in the original patent was shown and that the reissue was invalid in respect to the first claim. (p. 466.)
3. The plaintiff testified "that he thought there 'was a mistake and deficiency in the patent;' that he did not consider that other manufacturers respected it; that he considered it deficient because it applied the friction-brake to the pheriphery of

*See Explanation of Notes, page III.

Argument of counsel.

the wheel, and that he believed the patent was entitled to cover different friction-clutch devices, so as to be a better protection against infringers." This was not regarded as proof of inadvertence or mistake in the original patent. (p. 466.)

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The history and facts of the case appear in the opinion of the court.

Mr. L. L. Coburn, for appellant :

The withdrawal of one ingredient in a patented combination, and the substitution of another which was well known at the date of the patent as a proper substitute, is a mere formal alteration of the combination, which does not constitute any defence to the charge of infringement.

Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290 ;] Gould v. Rees, 15 Wall. 187 [9 Am. & Eng. 39 ;] Blake v. Robertson, 11 Blatch. 237 ; Taylor v. Garretson, 9 Blatch. 156 ; King v. Louisville Cement Co., 6 Fish. 336.

A combination claim is infringed when all of the elements of the claim are used, either in the form shown in the patent, or in the form of old and well-known mechanical equivalents, whether substituted in place of all or part of them.

Seymour v. Osborne, 11 Wall. 553 [8 Am. & Eng. 290 ;] American Whip Co. v. Lombard, 4 Cliff. 505 ; Fuller v. Yentzer, 94 U. S. 288 [11 Am. and Eng. 138 ;] Water Meter Co. v. Desper, 101 U. S. 332 [12 Am. & Eng. 380.]

The first claim of the reissue is within the scope of the claim of the original patent and is legally identical with it.

Gage v. Herring, 107 U. S. 640 [14 Am. & Eng. 454 ;] Reed v. Chase, 25 Fed. Rep. 95.

Messrs. L. L. Bond and E. A. West, for appellees :

If the later combination is new, or one element thereof is new, it is not an infringement.

Gould v. Rees, 15 Wall. 187 [9 Am. & Eng. 39 ;] Seymour v. Osborne, 11 Wall. 516 [8 Am. & Eng. 290 ;] Eames v.

Opinion of the court.

Godfrey, 1 Wall. 78 [7 Am. & Eng. 158 ;] Prouty v. Ruggles, 16 Pet. 336 [4 Am. & Eng. 351 ;] Fuller v. Yentzer, 94 U. S. 288 [11 Am. & Eng. 138.]

If the elements are not combined, connected, and arranged in the same manner, there is no infringement.

Singer v. Walmsley, 1 Fish. 558 ; Brooks v. Fiske, 15 How. 212 [6 Am. & Eng. 15.]

By combining old parts, a patentee cannot prevent others from recombining them.

Hailes v. Van Wormer, 20 Wall. 371 [9 Am. & Eng. 340 ;] Fuller v. Yentzer, 94 U. S. 288 [11 Am. & Eng. 138.]

Only the originator of a new art or an entire machine is entitled to a broad application of equivalents.

R. R. Co. v. Sayles, 97 U. S. 556 [12 Am. & Eng. 121 ;] McCormick v. Talcott, 20 How. 402 [6 Am. & Eng. 410.]

The reissue falls clearly within the rule stated in Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303 ;] Mahn v. Harwood, 112 U. S. 354 [15 Am. & Eng. 322 ;] Wollensak v. Reiher, 115 U. S. 96 [p. 162 *ante*.]

The reissue is void because obtained after appellants obtained their patents ; intervening rights being involved.

Clements v. Odorless etc. Co., 109 U. S. 641 [15 Am. & Eng. 44 ;] Turner etc. Mnfg. Co. v. Dover Stamping Co., 111 U. S. 319 [15 Am. & Eng. 238 ;] Brown v. Davis, 116 U. S. 237 [p. 212 *ante*.]

Mr. Justice BLATCHFORD delivered the opinion of the court :

This is a suit in equity brought in the Circuit Court of the United States for the Northern District of Illinois by Robert Newton against the Furst and Bradley Manufacturing Company and others, to recover for the infringement of reissued letters patent, No. 8,986, granted to the plaintiff, December 2d, 1879, on an application, filed October 15th, 1879, for an improvement in gang-plows, (the original patent, No. 58,612, having been granted to F. S. Davenport as inventor, October 9th, 1866.)

Opinion of the court.

The specification and claims of the original, and those of the reissue, and the drawings of the reissue, are as follows, the parts in each which are not found in the other being in italic :

Original.

“Be it known that I, F. S. Davenport, of Jerseyville, Jersey county, and State of Illinois, have invented a new and improved *gang*-plow ; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, *in which*—

Reissue.

“Be it known that I, F. S. Davenport, of Jerseyville, Jersey County, and State of Illinois, have invented a new and improved *wheel* plow ; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

The object of my invention is to provide improved means for utilizing the draft of the team in raising a plow from the ground ; and to this end my invention consists, first, in the combination, with a swing-axle and ground or carrying wheel, of friction-clutch mechanism and means for engaging and disengaging the latter with the ground or carrying wheel, said parts being constructed and adapted to raise the plow by locking the swing-axle to the carrying wheel by friction-clutch engagement, and raise the plow-beam by the draft or power of the team ; second, in the combination, with a ground wheel, a swing-axle,

Opinion of the court.

and a plow-beam connected to the latter, of clutch mechanism connected to the axle and adapted by engagement with the wheel to utilize the draft of the team in turning the swing-axle into upright position, and thereby raise the plow-beam; third, in the combination, with a ground-wheel, a swing-axle, and a plow-beam connected to the latter, of a friction-clutch connected to the axle and adapted, by contact with the wheel, to turn the axle into upright position, and thereby raise the plow-beam by the aid of the draft of the team.

Figure 1 is a plan or top view of my invention; Fig. 2, a side view of the same, partly in section as indicated by the line *x x*, Fig. 1; Fig. 3, a transverse vertical section of the same, taken in the line *y y*, Fig. 1. Similar letters of reference indicate like parts.

This machine consists of a frame, A, made of two parallel beams or bars, *a a*, braced together near the front and back pieces, *b b*. From each of these beams or bars depends a plow, B. To the front cross-piece is bolted an iron standard, C, strengthened by an iron stay, D, running down to the back cross-piece. To the top of the standard, C, is

*Referring to the drawings, Figure 1 is a plan or top view of my invention; Fig. 2 is a side view of the same, partly in section, as indicated by the line *x x*, Fig. 1; Fig. 3 is a transverse vertical section of the same, taken in the line *y y*, Fig. 1. Similar letters of reference indicate like parts.*

This machine consists of a frame, A, made of two parallel beams or bars, *a a*, braced together near the front and back pieces, *b b*. From each of these beams or bars depends a plow, B. To the front cross-piece is bolted an iron standard, C, strengthened by an iron stay, D, running down to the back cross-piece. To the top of the standard, C, is

F. S DAVENPORT,
Assignor to R. NEWTON.
Gang-Plow.

No. 8,986.

Reissued Dec. 2, 1879.

WITNESSES

C. A. Nottingham
A. M. Bright.

INVENTOR

F. S. Davenport.
By Sargent & Sargent.
ATTORNEY

Opinion of the court.

attached a spring seat, E, the whole supported upon two wheels, F F, each turning upon an *iron axle, c, attached to a hinged board, G,*

It will be observed that one of the *axles, c,* is attached to the front upper side of the *hinged board, G,* and the other to the back or under side, in such a manner that when it is turned down in a horizontal position to lower the plows to the ground, the wheel that runs in the furrow will be as much lower than the other as the depth of the furrow may require. The *axle* that carries the wheel that runs in the furrow is so formed that it may be removed from the back of the *hinged board* and *bolted* to the front so that the machine may run level when there is no furrow for the wheel to run in, as is the case when preparing the ground for cotton-seed.

The *hinged board G* is attached to the plow-frame by two iron hinges, H H', the one H on the side of the long beam forming an arm or lever, I, to which is attached a chain, J, which passes over a wheel, K, and is made fast to the plow-frame. The wheel K turns upon a stud in the end of a lever, L, this lever being bolted to the foot-board M, which is hinged to the plow-frame in the same man-

attached a spring seat, E, the whole supported upon two wheels, F F, each turning upon a *journal, c, of a swing-axle, G.*

It will be observed that one of the *journals, c,* is attached to the front or upper side of the *swing-axle, G,* and the other to the back or under side, in such a manner that when it is turned down in a horizontal position to lower the plows to the ground, the wheel that runs in the furrow will be as much lower than the other as the depth of the furrow may require. The *journal* that carries the wheel that runs in the furrow is so formed that it may be removed from the back of the *swing-axle* and *be secured* to the front, so that the machine may run level when there is no furrow for the wheel to run in, as is the case when preparing the ground for cotton-seed.

The *swing-axle G* is attached to the plow-frame by two iron hinges, H H', the one H on the side of the long beam forming an arm or lever, I, to which is attached a chain, J, which passes over a wheel, K, and is made fast to the plow-frame. The wheel K turns upon a stud in the end of a lever, L, this lever being bolted to the foot-board M, which is hinged to the plow-frame in the same man-

Opinion of the court.

ner and at the same place as the *axle-board* G. To the opposite end of the foot-board is bolted a bracket or stop, *d*, against which rests an arm, *e*, by which the *hinged board* G is operated, the arm *e* being held in the vertical position by a latch, N, which is lifted by placing the foot on the back part of it.

Now, it will be seen that to lower the *plows* to the ground it is only necessary to bring down the arm *e* till a block, *f*, which is bolted to its side, rests upon a *roller*, *g*, of a lever, O, which is secured in the required position by a notched quadrant, N. It will be observed, that, as the lever O is moved forward from notch to notch, the plows will cut deeper and deeper, and the reverse as it is drawn back. By these details the driver has entire control of the depth of the furrow without moving from his seat or stopping the machine.

Through a mortise in the top of *the* arm *e* passes a small iron lever, P, to which is attached a rod, Q, connecting it with a brake, R, which acts upon one of the wheels, F, the brake R working upon a pin fixed in a block of wood or an iron plate fastened to the front side of the *hinged board* G. The object of this brake is to facilitate the ope-

ner and at the same place as the axle G. To the opposite end of the foot-board is bolted a bracket or stop, *d*, against which rests an arm, *e*, by which the *swing-axle* G is operated, the arm *e* being held in the vertical position by a latch, N, which is lifted by placing the foot on the back part of it.

Now, it will be seen that to lower the *plow* to the ground it is only necessary to bring down the arm *e* till a block, *f*, which is bolted to its side, rests upon a *stop*, *g*, of a lever, O, which is secured in the required position by a notched quadrant, N. It will be observed that, as the lever O is moved forward from notch to notch, the plows will cut deeper and deeper, and the reverse as it is drawn back. By these details the driver has entire control of the depth of the furrow without moving from his seat or stopping the machine.

Through a mortise in the top of arm *e* passes a small iron lever, P, to which is attached a rod, Q, connecting it with a brake, R, which acts upon one of the wheels F, the brake R working upon a pin fixed in a block of wood or an iron plate fastened to the front side of the *swing-axle* G. The object of this brake is to facilitate the opera-

Opinion of the court.

ration of lifting the plows out of the ground when the machine is moving forward ; for, by applying but a little force to the lever P the brake is pressed sufficiently hard to the wheel to turn the *hinged board* to the vertical position.

The draft-pole or tongue C† is fastened to the under side of the foot-board M by two bolts, a†, a number of holes being made, so that the tongue may be moved to the right or left to give the required land to the plows. The back holes b† are made oblong, so that *it* can be slanted when needed. The tongue may, if necessary, be used on either side of the draft-line, and the double-tree attached to the foot-board independent of the tongue. This arrangement is chiefly for the convenience of using three horses abreast.

When the *hinged board* G is turned down in the horizontal position the lever or arm I gives the chain J, which is attached to it, considerable slack, allowing the tongue to move up and down without influencing the plows, constituting what is commonly called "a limber tongue."

In regard to raising the plows out of the ground, it will be observed that the front part of the machine is lifted nearly two-thirds of its course

tion of lifting the plows out of the ground when the machine is moving forward, for by applying but a little force to the lever P the brake is pressed sufficiently hard to the wheel to turn the *swing-axle* to the vertical position.

The draft-pole or tongue C^x is fastened to the under side of the foot-board M by two bolts a^x, a number of holes being made, so that the tongue may be moved to the right or left to give the required land to the plows. The back holes b^x are made *as oblong slots*, so that *the tongue* can be slanted when needed. The tongue may, if necessary, be used on either side of the draft-line, and the double-tree attached to the foot-board independent of the tongue. This arrangement is chiefly for the convenience of using three horses abreast.

When the *swing-axle* G is turned down in the horizontal position the lever or arm I gives the chain J, which is attached to it, considerable slack, allowing the tongue to move up and down without influencing the plows, constituting what is commonly called a "limber tongue."

In regard to raising the plows out of the ground, it will be observed that the front part of the machine is lifted nearly two-thirds of its course

Opinion of the court.

before the lever I tightens the chain and commences to lift the back part. This contrivance produces an easy motion, without causing either jerk or strain upon the horses or the machine.

The hind plow can be raised or lowered independent of the other, the standard B' sliding in an iron block, O†, and operated by a lever, A†, extending forward to the front of the seat, and secured in the required position by notches in the side of the seat-standard, as shown in Fig. 3.

I claim as new and desire to secure by letters patent—

1. *The lever P, rod Q, and brake R, arranged and operated as and for the purpose described.*

2. *The hinged board G, in connection with the reversible axles, substantially as and for the purpose described.*

3. *The lever O and quadrant N, for regulating the depth of the furrow, substantially as and for the purpose specified.*

4. *Lifting the hind part of the machine by means of the lever or arm I, in connection with the chain J, wheel K, and lever L, these parts operating together, substantially as and for the purpose described.*

before the lever I tightens the chain and commences to lift the back part. This contrivance produces an easy motion without causing either jerk or strain upon the horses or the machine.

The hind plow can be raised or lowered independent of the other, the standard B' sliding in an iron block, O^x, and operated by a lever, A^x, extending forward to the front of the seat, and secured in the required position by notches in the side of the seat-standard, as shown in Fig. 3.

Having fully described my invention, what I claim as new and desire to secure by letters patent is—

1. *In a wheel-plow, the combination, with a swing-axle and ground or carrying wheel, of friction-clutch mechanism, and means for engaging and disengaging the latter with the ground or carrying wheel, said parts being constructed and adapted to raise the plow by locking the swing-axle to the carrying wheel by friction-clutch engagement, and raise the plow-beam by the draft or power of the team, substantially as set forth.*

2. *In a wheel-plow, the combination with a ground-wheel, a swing-axle, and a plow-beam connected to the latter, of clutch-mechanism connected to the axle, and*

Opinion of the court.

- | | |
|--|--|
| <p>5. <i>Hinging the foot-board M to the plow-frame, as described.</i></p> <p>6. <i>Securing the tongue or draft-pole to the foot-board M, in the manner and for the purpose described.</i></p> <p>7. <i>The sliding plow-standard B', guide-block O†, lever A†, and notched seat-standard C, when used together and in connection with the other parts.</i></p> <p>8. <i>Connecting the lever L with the tongue or draft-pole by fastening it to the foot-board, the whole operating together, substantially as and for the purpose set forth."</i></p> | <p><i>adapted by engagement with the wheel to utilize the draft of the team in turning the swing-axle into upright position, and thereby raise the plow-beam, substantially as set forth.</i></p> <p>3. <i>In a wheel-plow, the combination, with a ground-wheel, a swing-axle, and a plow-beam connected to the latter, of a friction-clutch connected to the axle, and adapted, by contact with the wheel, to turn the axle into upright position, and thereby raise the plow-beam by aid of the draft of the team, substantially as set forth."</i></p> |
|--|--|

The answer sets up, among other defences, non-infringement; and that the reissued patent is invalid because not for the same invention as the original. On a hearing on proofs, the Circuit Court entered a decree, which finds that the equities are with the defendants, and that they do not infringe on the rights of the plaintiff, and dismisses the bill. The plaintiff has appealed to this Court.

By the opinion of the Circuit Court in this case (11 Biss. 405,) it appears that the defences of non-infringement and of the invalidity of the reissue were sustained. Infringement is not asserted in this court as to any claim of the reissue but the first.

In regard to the subject-matter of that claim, the specification of the reissue states that the invention consists "in the combination, with a swing-axle and ground or carrying wheel, of friction-clutch mechanism, and means for engaging and disengaging the latter with the ground or carrying wheel, said parts being constructed and adapted to raise the plow by locking the swing-axle to the carrying-wheel by

Opinion of the court.

friction-clutch engagement, and raise the plow-beam by the draft or power of the team." The first claim of the reissue uses the same language, with the prefix of the words "In a wheel-plow," and the addition at the end, of the words "substantially as set forth."

The other alterations made in the specification are, that "*gang-plow*" is changed into "*wheel-plow*;" "*iron axle*" into "*journal*;" and "*hinged-board*" into "*swing-axle*."

The first claim of the original patent is for a combination of the lever P with the rod Q and the brake R. When force is applied to the lever P, motion is communicated through the rod Q to the brake R, which brake acts on the periphery of one of the two supporting or carrying wheels F, the axle of which, c, is attached to a hinged board G, and by the action of the brake the hinged board is changed from a horizontal position to a vertical position, and the effect is to facilitate the operation of lifting the plows out of the ground. The first claim of the original patent covers only the combination of the three specific devices—the lever P, the rod Q, and the brake R. The first claim of the reissue calls the brake R "friction-clutch mechanism," and calls the lever P and the rod Q "means for engaging and disengaging the latter with the ground or carrying wheel," and then claims the combination of four things—(1) friction-clutch mechanism; (2) means for engaging and disengaging it with the ground or carrying wheel; (3) a swing-axle; (4) a ground or carrying wheel.

The hinged-board G of the plaintiff's original patent is ten or twelve inches wide, and at each end of it is a spindle for one of the two ground or carrying wheels to run on, the spindles being in line with one edge of the hinged-board. The forward ends of the plow-beams are attached by joints to what is the back edge of the hinged-board while that board is horizontal, so that when it comes to be vertical by the action of the brake and the forward movement of the team, the forward ends of the plow-beams are raised in

Opinion of the court.

height a distance equal to the width of the hinged-board, lifting the plows.

The defendants' machine is thus described in the opinion of the Circuit Court, and the description is conceded by the counsel for the plaintiff to be a fair one: "The defendants' machine is a wheel or sulky plow, with a bent or cranked iron axle, upon which the plow-beams are pivoted at about two-thirds of the distance from the forward end to the coulter, so that the plow is nearly balanced upon the axle or crank, and the arrangement of the mechanism is such that when the plow is running or operating in the ground, the crank part is in a horizontal position; and when it is desired to raise the plows out of the ground, the crank is turned upward towards a vertical position, whereby the forward ends of the beam are raised until the point of the plow runs out of the ground. After the forward end of the beam has risen to a certain point, it strikes a stop, so that, when the crank has assumed a vertical position, the plow is balanced across the crank part of the axle, thus sustaining the plow at the height above the ground of the crank when in a vertical position. This turning of the crank-axle so as to lift the plow is accomplished by a friction band or brake, which is made to engage with an inner extension of the hub of one of the carrying-wheels, so that, as the wheel moves forward, it causes the crank-axle to turn upwards from a horizontal to a vertical position."

The Circuit Court was of opinion that if the state of the art was such as to entitle Davenport to a broad claim for any device by which the plow is lifted by the power of the team through a brake or friction clutch, the defendants' machine would infringe. But the court found that, prior to Davenport, devices had been used in agricultural implements for utilizing, by means of a brake, the motion of the carrying-wheel, through a crank-axle, in raising operative parts of the machine from the ground, which devices were so alike in structure and so analogous in use to those of

Notes and citations.

Davenport, as to require his claims to be limited to his specific devices. In view of those prior devices the court held that the defendants' friction-band could not be regarded as the same means for engaging and disengaging the carrying-wheel and the axle as the brake of Davenport ; and that the defendants' crank-axle was not the plaintiff's hinged board. In these views we concur.

The reissue was applied for more than thirteen years after the original was granted, and after the defendants had begun to make machines of the pattern now complained of. The original patent did not make a swing-axle and a carrying-wheel elements in the combination of the first claim of that patent. The reissue was evidently taken to cover the defendants' machine, which did not infringe the first claim of the original patent, because it did not have the Davenport brake R. No mistake or inadvertence is shown. The plaintiff, in his testimony as a witness, assigns as a reason for the reissue that he thought there "was a mistake and a deficiency in the patent;" that he did not consider that other manufacturers respected it ; that he considered it deficient because it applied the friction-brake to the periphery of the wheel ; and that he believed the patent was entitled to cover different friction-clutch devices, so as to be a better protection against infringers.

Without pursuing the subject further, we are of opinion that, within numerous decisions of this court, the reissued patent is invalid, as respects its first claim.

Decree affirmed.

119 U. S. 384-385.

Notes :

3. " Accident, inadvertence, or mistake :"

Manufacturing Co. v. Ladd, 102 U. S. 408 [12 Am. & Eng. 1.]

Miller v. Brass Co., 104 U. S. 350 [13 Am. Eng. 303.]

McMurray v. Mallory, 111 U. S. 97 [15 Am. & Eng. 171.]

Coon v. Wilson, 113 U. S. 268 [15 Am. & Eng. 504.]

Notes and citations.

Wollensak *v.* Reiher, 115 U. S. 96 [p. 162 *ante.*]

Matthews *v.* Iron Clad Co., 124 U. S. 347.

Cornell *v.* Weidner, 127 U. S. 261.

Of solicitors :

Hartshorn *v.* Saginaw Barrel Co., 119 U. S. 664.

Ives *v.* Sargent, 119 U. S. 652.

Patent in suit :

No. 58,612. Davenport, F. S. October 9, 1866. Reissue,

No. 8,986. December 2, 1879. Gang Plow.

OTHER SUITS ON SAME PATENT :

Newton *v.* Furst & Bradley Mnfg. Co., 1882. 11 Biss. 405; 14
Fed. Rep. 465; 15 Reporter, 196.

Cited :

IN CIRCUIT COURTS IN:

Hill *v.* Sawyer, June, 1887. 31 Fed. Rep. 282.

Syllabus.

CALIFORNIA ARTIFICIAL STONE PAVING COMPANY, APPELLANT, v. F. W. SCHALICKE.*

119 U. S. 401-407. Oct. Term, 1886.

[Bk. 30, L. ed. 471; 38 O. G. 329.]

Submitted December 6, 1886. Decided December 20, 1886.

Particular patent construed and not infringed.

1. The claims of reissued letters patent, No. 4,364, granted to Schillinger, May 2, 1871, (original No. 105,599, July 19, 1870,) for Concrete Pavements, *held*, not infringed by a concrete pavement laid in strips in one mass from the curb inwardly, and then marked crosswise into blocks with a blunt marker to the depth of about one-sixteenth of an inch where such marking was for ornamentation, and produced no free joints between the blocks, the free joints being an essential element of the patented invention. (p. 477.)

[Citations in the opinion of the court:]

Schillinger v. Gunther, 14 Blatch. 152. p. 475.

Schillinger v. Gunther, 17 Blatch. 66. p. 476.

California Artificial S. P. Co. v. Molitor, 7 Sawy. 190. p. 476.

California Artificial S. P. Co. v. Freeborn, 8 Sawy. 443. p. 476.

Schillinger v. Greenway Brewing Co., 21 Blatch. 383. p. 477.

Kubl v. Mueller, 21 Fed. Rep. 510. p. 477.

Appeal from the Circuit Court of the United States for the District of California.

The case is stated by the court.

Mr. M. A. Wheaton, for appellant:

The one thing which Schillinger did that made such a vast improvement in concrete pavements was *to divide them into blocks*. This was the change he made, and the only change.

Simple as this improvement was it turns out to be one of inestimable value, and one that was not dreamed of before Schillinger's invention.

* See Explanation of Notes, page III.

Argument of counsel.

All the decisions which have been given upon this patent agree that the advantages of Schillinger's invention result solely from the separation or "joints" which divides the pavement into blocks. The *dividing joints* are the means employed, and any other party making *dividing joints* that operate in the same way and produce the same results are using Schillinger's *exact means*.

Both Judge Blatchford and Judge Sage have decided directly that the pavement divided into blocks on the surface by a *mere fish-line* indentation infringed the patent.

Mr. Manuel Eyre, for appellee :

I respectfully submit that in no remotest manner, allowing the utmost latitude to the invention, whether the patentee has specified such benefit or not, has the appellee infringed in the slightest particular, and that the judgment of the Circuit Court should be affirmed.

The invention, as stated in the specification, consists in laying a concrete pavement in sections "so that *each section* can be taken up and relaid without *disturbing the adjoining section*." In all the reported decisions the patent is so interpreted.

The plaintiff forms his joint by the permanent interposition of some material between the blocks. The appellee inserts nothing *between* the blocks. After he has marked the surface, and the pavement has hardened, it is one solid mass, both the coarse under layer and the top layer are each one continuous mass. If you wish to remove a block of the patentee's pavement you can pry it out separately, but the evidence shows that to replace one of the squares in our pavement you must chisel it out. That shows the difference. There are *no blocks* in our pavement.

It has been claimed by appellant that Judge Sage had decided that marking the surface with a fish-line was an infringement, and was so decided by him in *Kuhl v. Mueller*, 21 Fed. Rep. 510. In that case the blocks were brought into court, and showed clean cuts making separate blocks.

Opinion of the court.

The contention of defendants that they only used a fish-line to mark the surface, was clearly disproved by the appearance of the blocks produced.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity, brought by the California Artificial Stone Paving Company, a California corporation, against F. W. Schalicke, to recover for the infringement of reissued letters patent, No. 4,364, granted to John J. Schillinger, May 2, 1871, for an improvement in concrete pavements, on the surrender of original letters patent, No. 105,559, granted to him July 19, 1870. The specification and drawings of the reissued patent are as follows:

“Figure 1 represents a plan of my pavement. Fig. 2 is a vertical section of the same. Similar letters indicate corresponding parts.

This invention relates to a concrete pavement, which is laid in sections, so that each section can be taken up and relaid without disturbing the adjoining sections. With the joints of this sectional concrete pavement are combined strips of tar paper, or equivalent material, arranged between the several blocks or sections in such a manner as to produce a suitable tight joint and yet allow the blocks to be raised separately without affecting the blocks adjacent thereto.

In carrying out my invention, I form the concrete by mixing cement with sand and gravel, or other suitable material, to form a plastic compound, using about the following proportions: One part, by measure, of cement, one part, by measure, of sand, and from three to six parts, by measure, of gravel, with sufficient water to render the mixture plastic; but I do not confine myself to any definite proportions or materials for making the concrete composition. While the mass is plastic, I lay or spread the same on the foundation or bed of the pavement, either in molds or between mova-

Opinion of the court.

ble joists of the proper thickness, so as to form the edges of the concrete blocks, *a a*, one block being formed after the other. When the first block has set I remove the joists or partitions between it and the block next to be formed, and then I form the second block, and so on, each succeeding block being formed after the adjacent blocks have set [and, since the concrete in setting shrinks, the second block, when set, does not adhere to the first, and so on,] and, when the pavement is completed, each block can be taken up independent of the adjoining blocks. Between the joints of the adjacent blocks are placed strips, *b*, of tar paper, or other suitable material, in the following manner: After completing one block, *a*, I place the tar paper, *b*, along the edge where the next block is to be formed, and I put the plastic composition for such next block up against the tar paper joint, and proceed with the formation of the new block until it is completed. In this manner I proceed until the pavement is completed, interposing tar paper between the several joints, as described. The paper constitutes a tight water-proof joint, but it allows the several blocks to heave separately, from the effects of frost, or to be raised or removed separately, whenever occasion may arise, without injury to the adjacent blocks. The paper, when placed against the block first formed, does not adhere thereto, and therefore the joints are always free between the several blocks, although the paper may adhere to the edges of the block or blocks formed, after the same has been set up in its place between the joints. [In such cases, however, where cheapness is an object, the tar paper may be omitted, and the blocks formed without interposing anything between their joints, as previously described. In this latter case, the joints soon fill up with sand or dust, and the pavement is rendered sufficiently tight for many purposes, while the blocks are detached from each other, and can be taken up and relaid, each independent of the adjoining blocks.]

What I claim as new, and desire to secure by letters patent, is—

JOHN J. SCHILLINGER.

Improvement in Concrete-Pavements.

No. 4,364.

Reissued May 2, 1871.

Fig. 1.

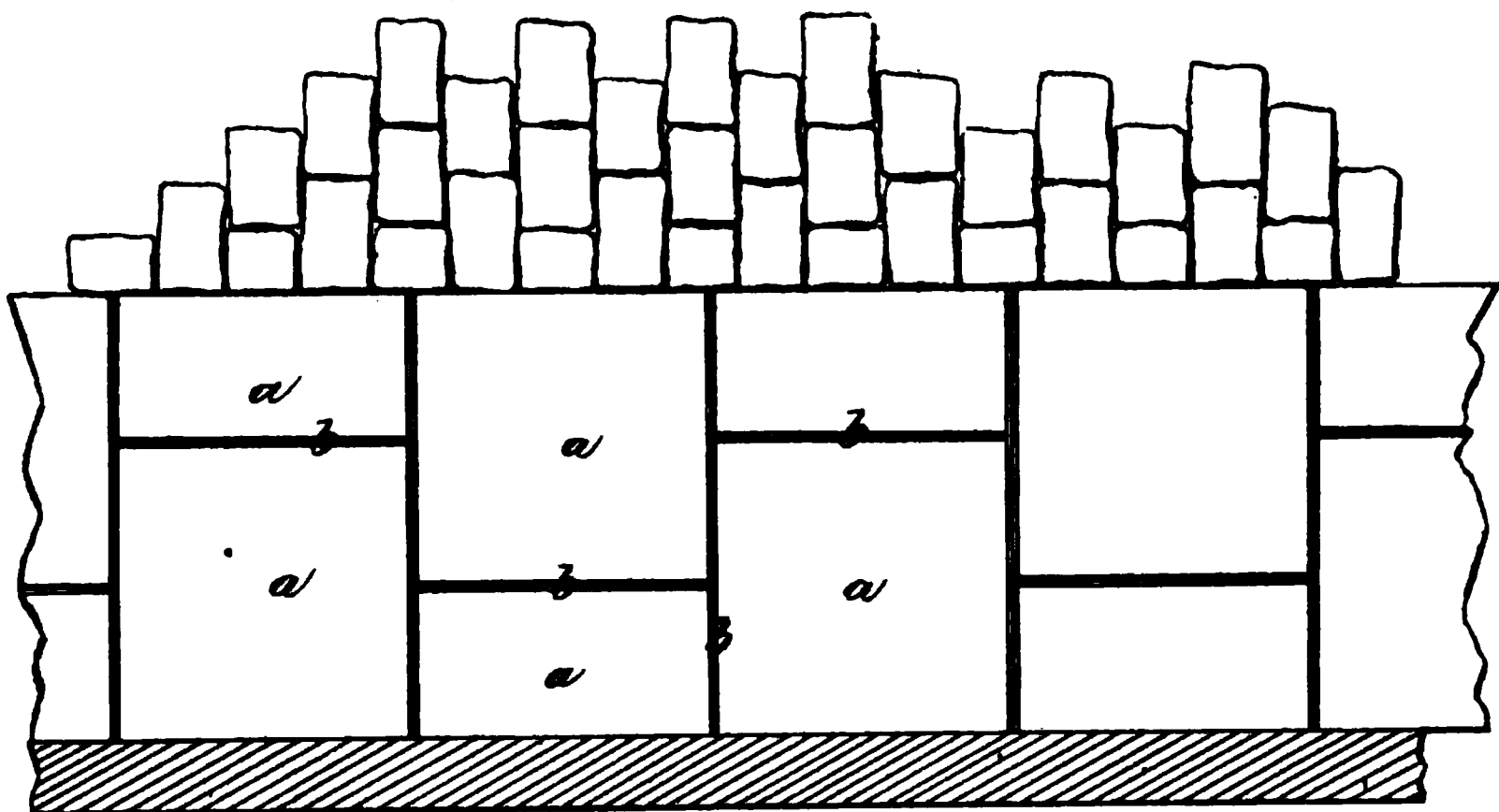
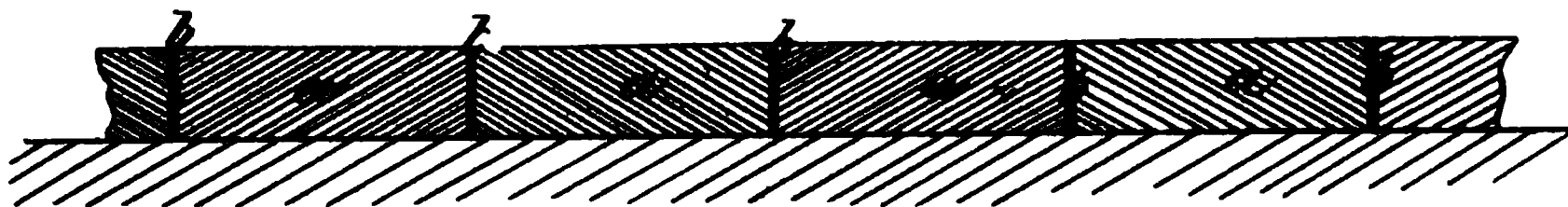


Fig. 2.



Witnesses:

E. F. Kastenhuber
C. Mahler.

Inventor.

John J. Schillinger

Opinion of the court.

1. A concrete pavement laid in detached blocks or sections, substantially in the manner shown and described.

2. The arrangement of tar paper, or its equivalent, between adjoining blocks of concrete, substantially as and for the purpose set forth."

On the first of March, 1875, Schillinger filed in the Patent Office a disclaimer, in which he disclaimed the matter above enclosed in brackets ; and stated also that he disclaimed "the forming of blocks from plastic material without interposing anything between their joints while in the process of formation."

The only defence set up in the answer is non-infringement. After a hearing, on proofs, the Circuit Court dismissed the bill, on the ground that the defendant's pavement did not infringe either one of the two claims of the patent.

This patent has been construed by several Circuit Courts since the disclaimer was filed. In *Schillinger v. Gunther*, 14 Blatch. 152, in the Southern District of New York, in February, 1877, the defendant's pavement had a bottom layer of coarse cement, on which was laid a course of fine cement, divided into blocks by a trowel run through that course while plastic. It possessed the advantage of Schillinger's invention, because any blocks in the upper course could be taken up without injury to the adjoining blocks. Concrete pavement having been before laid in sections, without being divided into blocks, the invention of Schillinger was held to consist in dividing the pavement into blocks, so that one block could be removed and repaired without injury to the rest of the pavement, the division being effected by either a permanent or a temporary interposition of something between the blocks. It was held that the effect of the disclaimer was to leave the patent to be one for a pavement wherein the blocks are formed by interposing some separating material between the joints ; that to limit the patent to the permanent interposition of a material equivalent to tar paper, would limit the actual invention ;

Opinion of the court.

that using the trowel accomplished the substantial results of the invention in substantially the same way devised by Schillinger; that the only difference in result was that the defendant's method left an open joint; that having a tight joint was not a material part of Schillinger's invention: and that the mode of operation involved in using the trowel was within the first claim of the reissue as it stood after the disclaimer.

In the same suit (17 Blatch. 66,) in August, 1879, it was held that the disclaimer took out of the first claim of the reissue only so much thereof as claimed a concrete pavement made of plastic material laid in detached blocks, without interposing anything between the joints in the process of formation, leaving the claim to be one for such a pavement laid in detached blocks, when free joints are made between the blocks, by interposing tar paper or its equivalent.

In *California Artificial S. P. Co. v. Molitor*, 7 Sawy. 190, in the District of California, in May, 1881, the defendant's pavement was made by cutting a lower course into sections with a trowel, to a greater or less depth, according to the character of the material, making a joint, and doing the same with an upper course, the upper joint being directly over the lower joint. Into the open joint, in each case, was loosely put some of the partially set material from the top of the laid course, answering the purpose of tar paper. A blunt and rounded joint marker, which was said to be $\frac{1}{16}$ or $\frac{1}{8}$ of an inch in depth, was then run over the line of the joints, marking off the block. The pavement was weaker along the line of the joint than in any other place. This was held to be an infringement.

In *California Artificial S. P. Co. v. Freeborn*, 8 Sawy. 443, in the District of California, in January, 1883, it was held, that, where nothing was interposed in the joint between a newly laid block and one laid before, but, after the material in the newly laid block had partially set, a blunt and

Opinion of the court.

rounded joint marker, $\frac{1}{8}$ of an inch in depth, was run along the line between the newly laid block and the one laid before, there was no infringement.

In *Schillinger v. Greenway Brewing Co.*, 21 Blatch. 383, in the Northern District of New York, in July, 1883, it was held that the second claim of the reissue was infringed by a concrete pavement which had an open cut made by a trowel entirely through two courses of material, the line of cut in the upper course being directly over the line of cut in the lower course; and that the interposition of the trowel, though temporary, was an equivalent for the tar paper, even though the joint was left open after the trowel was removed, and was not made tight.

In *Kuhl v. Mueller*, 21 Fed. Rep. 510, in the Southern District of Ohio, in June, 1884, it was held that the use of any marker was an infringement, which made a cut or depression having the effect to cause the pavement to break by upheaval, or cracking, from any cause, along the line of the cut or depression; and that, as the blocks from the pavements laid by the defendant showed clear, distinct, and complete lines of division, there was infringement, whether those lines were produced by a trowel or by a marker.

The evidence in the present case shows that the defendant, during the process of making his pavement, marked off its surface into squares. But the question is whether he, to any extent, divided it into blocks, so that the line of cracking was controlled, and induced to follow the joints of the divisions, rather than the body of the block, and so that a block could be taken out, and a new one put in its place, without disturbing or injuring an adjoining block. The specification makes it essential that the pavement shall be so laid in sections "that each section can be taken up and relaid without disturbing the adjoining sections." Again, it says that the joint between the blocks "allows the several blocks to heave separately, from the effects of frost, or to be raised or removed separately, whenever occa-

Notes and citations.

sion may arise, without injury to the adjacent blocks." This is essential; and in all the cases where infringement has been held to have been established, there have been blocks substantially separate, made so by the permanent or temporary interposition of a separating medium or a cutting instrument, so that one block could upheave or be removed without disturbing the adjoining blocks. The patentee, in the disclaimer, expressly disclaimed "the forming of blocks from plastic material without interposing anything between their joints while in the process of formation."

It appears that the defendant laid his pavement in strips from the curb of the sidewalk inward to the fence, in one mass, and then marked the strip crosswise with a blunt marker, which is made an exhibit, to the depth of about one-sixteenth of an inch. But it is not shown that this produced any such division into blocks as the patent speaks of, even in degree. There were no blocks produced, and, of course, there was nothing interposed between blocks. The mass underneath was solid, in both layers, laterally. So far as appears, what the defendant did was just what the patentee disclaimed. The marking was only for ornamentation, and produced no free joints between blocks, and the evidence as to the condition of the defendant's pavements after they were laid shows that they did not have the characteristic features above mentioned as belonging to the patented pavement.

Without affirming or disaffirming the constructions given to the patent in the particular cases cited from the circuit courts, we are of opinion that, under any construction which it is possible to give to the claims, the defendant in this case has not infringed.

Decree affirmed.

119 U. S. 406-407.

Patent in suit:

No. 105,599. Schillinger, J. J. July 19, 1870. Reissue
No. 4,364. May 2, 1871. Concrete Pavement.

Notes and citations.

OTHER SUITS ON SAME PATENT :

Schillinger v. Gunther, 1877. 14 Blatch. 152 ; 2 Ban. & Ard. 544 ;
11 O. G. 831.

Schillinger v. Gunther, 1878. 15 Blatch. 303 ; 3 Ban. & Ard. 491 ;
14 O. G. 713.

Schillinger v. Gunther, 1879. 17 Blatch. 66 ; 4 Ban. & Ard. 479 ;
16 O. G. 905.

California Artificial Stone Paving Co. v. Perine, 1881. 7 Sawy.
190 ; 8 Fed. Rep. 821 ; 20 O. G. 813.

Schillinger v. Greenway Brewing Co., 1883. 21 Blatch. 383 ; 17
Fed. Rep. 244 ; 24 O. G. 495.

California Artificial Stone Paving Co. v. Freeborn, 1883. 8 Sawy.
443 ; 17 Fed. Rep. 735.

Kuhl v. Mueller, 1884. 21 Fed. Rep. 510 ; 28 O. G. 541.

California Artificial Stone Paving Co. v. Molitor, 1885. 113 U. S.
609 [15 Am. & Eng. 521.]

Shannon v. Bruner, 1887. 33 Fed. Rep. 289 ; 41 O. G. 697.

Cited :

IN SUPREME COURT IN :

Hurlbut v. Schillinger, 1889: 130 U. S. 456; Bk. 32, L. ed. 1011.

IN CIRCUIT COURTS IN :

Shannon v. Bruner, May, 1887. 33 Fed. Rep. 289.

Hill v. Sawyer, June, 1887. 31 Fed. Rep. 282.

Schillinger v. Middleton, August, 1887. 31 Fed. Rep. 736.

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Syllabus.

LOUIS P. SUTTER ET AL., APPELLANTS, v. ISAAC ROBINSON, AND JULIUS ROSENTHAL, ADMINISTRATORS OF ABRAHAM ROBINSON, Deceased.*

119 U. S. 530-542. Oct. Term. 1886.

[Bk. 30, L. ed. 492; 38 O. G. 230.]

Reversing Robinson v. Sutter, 10 Biss. 100, and *Ibid.* 11 Fed. Rep. 798.

Argued December 9, 10, 1886. Decided December 20, 1886.

Particular patent. File-wrapper and contents. Construction of patent in view of limitations imposed by Patent Office.

1. Letters patent, No. 216,293, granted June 10, 1879, to Abraham Robinson, for Improved Apparatus for steaming Leaf-Tobacco, construed and limited, in view of express abandonment and disavowal in the application file-wrapper and contents, to the substitution of a wooden vessel for holding tobacco while being resweated, in place of a metallic one, and *held*, that if this construction in patentee's apparatus, is equivalent to the cases, boxes, or packages in which tobacco-leaves are originally packed by the producer, it has been anticipated by various persons and is wanting in novelty. If not, it is not infringed by respondents, who use as a tobacco-holder the ordinary tobacco cases in which the leaf comes packed. (p. 493.)
2. A patentee having, in compliance with the requirements of the Patent Office, excluded by amendment certain matter from his original specification, is not at liberty to insist upon a construction of his patent which will include what he was expressly required to abandon and disavow in it. (p. 497.)

[Citations in the opinion of the court:]

Robinson v. Sutter, 10 Biss. 100; 8 Fed. Rep. 828. p. 491.

Robinson v. Sutter, 11 Fed. Rep. 798. p. 491.

Shepard v. Carrigan, 116 U. S. 593. [p. 235 *ante.*] p. 497.

* See Explanation of Notes, page III.

Argument of counsel.

Appeal from the Circuit Court of the United States for the Northern District of Illinois.

The history and facts of the case fully appear in the opinion of the court.

Messrs. Thomas A. Banning and Ephraim Banning, for appellants :

The court erred in sustaining the Robinson patent in view of the various prior uses shown by the evidence.

While several prior uses are well established we have no hesitation in singling out the one at August Beck & Co.'s Chicago, as most clearly made out by the proofs.

The prime, indispensable, and important feature of complainants' combination, according to the patent, is the wooden tobacco holding vessel. In the use of this Robinson considered his discovery to lie. He regarded it as the only feature of his combination. He admitted that the "general structural plan" was old, but he thought it new to resweat in a wooden tobacco holder.

From the evidence introduced after the court's first opinion, it appears that at the time of the Robinson invention, a wooden tobacco holding vessel had been long known and extensively used in the resweating of tobacco. It was known and used as early as July 11, 1865, and is described in the patent to W. W. Huse, of that date.

From the testimony given we submit that the complainants' patent cannot be sustained with the construction put upon it by the complainants and the court. If they take a more confined view, then the court erred in finding infringement.

It is plain that the defendants' sweat room as described has no vessel "suspended" in another. Yet this is made an element of complainants' patent. The cases containing the tobacco cannot be considered as this vessel as they form *no part of the apparatus*. Nor are they "tight." They are free to the ingress of the steam arising from the lower part of the chamber.

Argument of counsel.

From reading complainants' patent it is evident that the patentee did not contemplate *operating* his invention in the same way as that embodied in the defendants' sweat-house. He nowhere intimates that the tobacco can be sweated *in the original cases*; on the contrary he must have *intended* that his mode of operation should be to remove the tobacco from the cases and deposit it by hand in the sweating chamber as the evidence shows to be the way employed. The construction and description of his apparatus limit him to that mode. In defendants' sweat-room, on the contrary, an important object was to dispense with the handling of the tobacco and to re-sweat it in the original packages. Their construction contained the features necessary to embody that idea. It was their mode of operation. Differing so widely in their principle of operation it is submitted that the two apparatus cannot be the same, nor one infringe the patent claiming the other.

Messrs. John W. Munday and Edmund Adcock, for appellees:

The patent sued upon is for an apparatus for steaming or resweating leaf tobacco. While some old methods were attempted to be used, to some extent, prior to Robinson's invention, the testimony in the record clearly shows that they were practically failures.

Robinson invented an apparatus to effect the desired result; and his patented apparatus consists, as stated in the specification of his patent, of three elements—a tank or chamber adapted to hold a body of water; a wooden vessel or tobacco-holder, in which the tobacco is packed in mass, which tobacco-holder is placed or suspended inside of said tank or chamber; and a heater or steam generator for heating or warming the body of water.

The efficiency and success of Robinson's apparatus and the marked or radical character of his improvement is significantly manifested by the fact that even before his patent was issued Robinson sold fifteen of these great apparatuses

Opinion of the court.

in one week on his first visit to New York to introduce his invention.

The defendants' apparatus is identical in principle and function, and has precisely the same mode of operation as the patented apparatus. It is true it is slightly disguised. It is square instead of round.

The complainants' invention is broader than the round or square form of his apparatus; than the particular method of supporting the wooden tobacco-holder above the body of water; than the degree of tightness with which the carpenter may construct his wooden tobacco-holder, whether it be round or square. This is apparent from the patent itself, as well as from the state of the prior art. The fact that Robinson himself, in his first successful apparatus, used an ordinary tobacco case as his tobacco-holder, and supported it over the body of water in the tank chamber on a slat floor, conclusively shows the scope of the invention, and it is a well-settled principle of law that the patentee's specification and claim shall be so construed as to be commensurate with his invention, if it can be done without doing violence to its language.

Haworth *v.* Hardcastle, 1 Web. Pat. Cas. 485; Grant *v.* Raymond, 6 Pet. 218 [4 Am. & Eng. 245;] Ames *v.* Howard, 1 Sumn. 482; Blanchard *v.* Sprague, 3 Sumn. 535; Davoll *v.* Brown, 1 Wood. & M. 53; Parker *v.* Haworth, 4 McLean, 372; LeRoy *v.* Tatham, 14 How. 181 [5 Am. & Eng. 313.] and opinion of Baron Parke there quoted; Neilson *v.* Harford, Web. Pat. Cas. 341 [3 Am. & Eng. 231;] Russell *v.* Cowley, Web. Pat. Cas. 470 [2 Am. & Eng. 76;] Corning *v.* Burden, 15 How. 252 [6 Am. & Eng. 69.]

Mr. Justice MATTHEWS delivered the opinion of the court:

This is a bill in equity filed by Isaac Robinson and Abraham Robinson against the appellants to restrain an alleged infringement of letters patent granted by the United States to Abraham Robinson on June 10, 1879, for an improved

Opinion of the court.

apparatus for resweating tobacco. The defences relied on are, that the patent is invalid for want of novelty, and a denial of the alleged infringement. The specifications and claims of the patent, with reference to accompanying drawings, are as follows:

“Figure 1 is a top or plan view of an apparatus embodying my improvements, and Fig. 2 is a vertical central section of the steam receiver and tobacco holder.

“Like letters of reference indicate like parts.

“It is usual to soften the leaves of tobacco, as is well known, in order to prepare them for being manufactured into cigars and other manufactured goods, and to bring out a good and uniform color. This has been done heretofore in various ways, and, among others, by dampening the leaves and exposing them to heat while in that condition.

“The object of this invention is to provide improved means for exposing the leaves to the action of steam for the purposes above set forth; and to that end my invention consists of a tobacco-holding vessel made of wood sufficiently porous to permit the steam to percolate through it, in combination, substantially as hereinafter described, with a steam-generating apparatus and a steam-receiving chamber surrounding the vessel for containing the tobacco.

“I am aware that the general structural plan of the apparatus hereinafter described is old, and I do not, therefore, here intend to claim the same independently of a tobacco receiving vessel made of wood sufficiently porous to permit the steam to percolate through it, as and for the purposes set forth, the said wooden vessel constituting, as I believe, an improvement upon the apparatus heretofore in use; for the reason that, in employing wood instead of metal in the construction of the said vessel, the tobacco is prevented from being tainted, and may be kept continually moist by the action of the steam instead of being merely heated and sweated by it, or steamed only by the generation of steam in the same vessel containing the tobacco; it being obvious

Opinion of the court.

that if the tobacco-receiving vessel be made of metal, as heretofore in devices of this class, the steam in an outer surrounding vessel would merely heat the tobacco and sweat it without imparting new moisture to it. Neither do I here intend to claim the process, as such, of steaming tobacco.

“In the drawings A represents an ordinary boiler for generating steam. B is a tank or vessel for receiving the steam generated by the boiler A. C is a tight wooden vessel for receiving the tobacco to be treated. This vessel should be provided with a tight-fitting cover, *a*. I make the vessel C of wood, as an essential feature of my invention, in order that the steam may sweat or percolate through it from the tank B, and so that the tobacco will not be tainted by contact with metal. The vessel C is enough smaller than the tank B to be suspended in the latter and leave an annular space, *b*, between the two, as well as a space underneath the bottom of the vessel C, as shown. The space *b* should also be covered. In order to provide a cover for the space *b*, and also suspend the vessel C firmly in the tank B, I employ an annular rim or lid, *c*, having an upwardly turned flange, *c'*, fitted to the vessel C, and a downwardly turned flange, *c''*, fitted to the tank B, screws or other fastenings passing through the flanges into the parts to which they are fitted; but it is not essential that these flanges should be continuous or extend entirely around the vessels. Neither is it essential that the flanged portions of the lid *c* should be continuous, or in the same piece with the remaining part of the said lid. It is, in fact, much the easier way to make the flanged portions separately from the lid proper, and I have represented them as made in that manner.

“I do not, however, here intend to be restricted to any particular way of applying the lid *c* and suspending the vessel C, as both may be done in various suitable ways; but I deem the manner shown to be the best.

“D is a steam-pipe leading from the upper part of the boiler A into the upper part of the space *b*, and E is a

A. ROBINSON.
Apparatus for Steaming Leaf-Tobacco.
No. 216,293. Patented June 10, 1879.

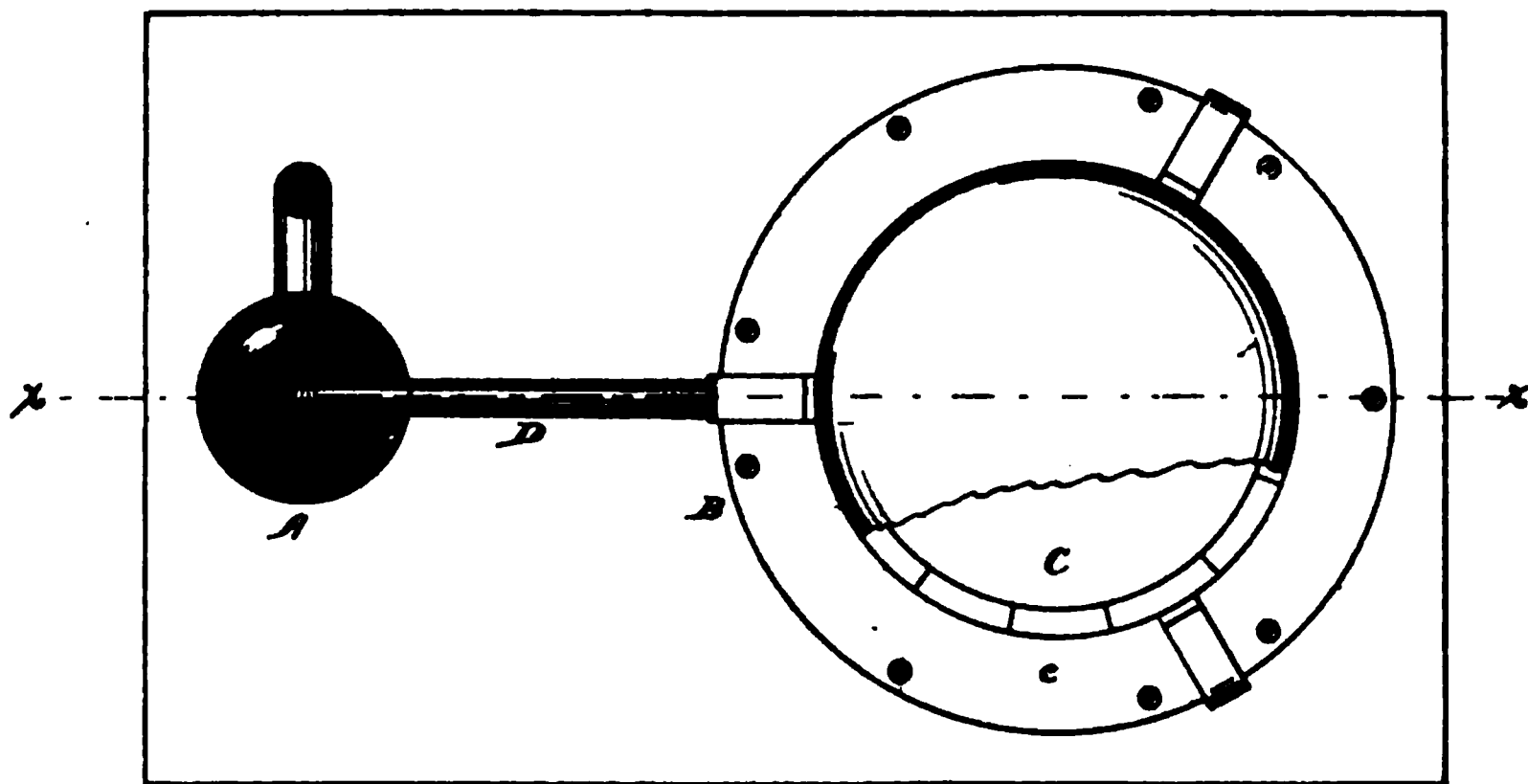


Fig. 1

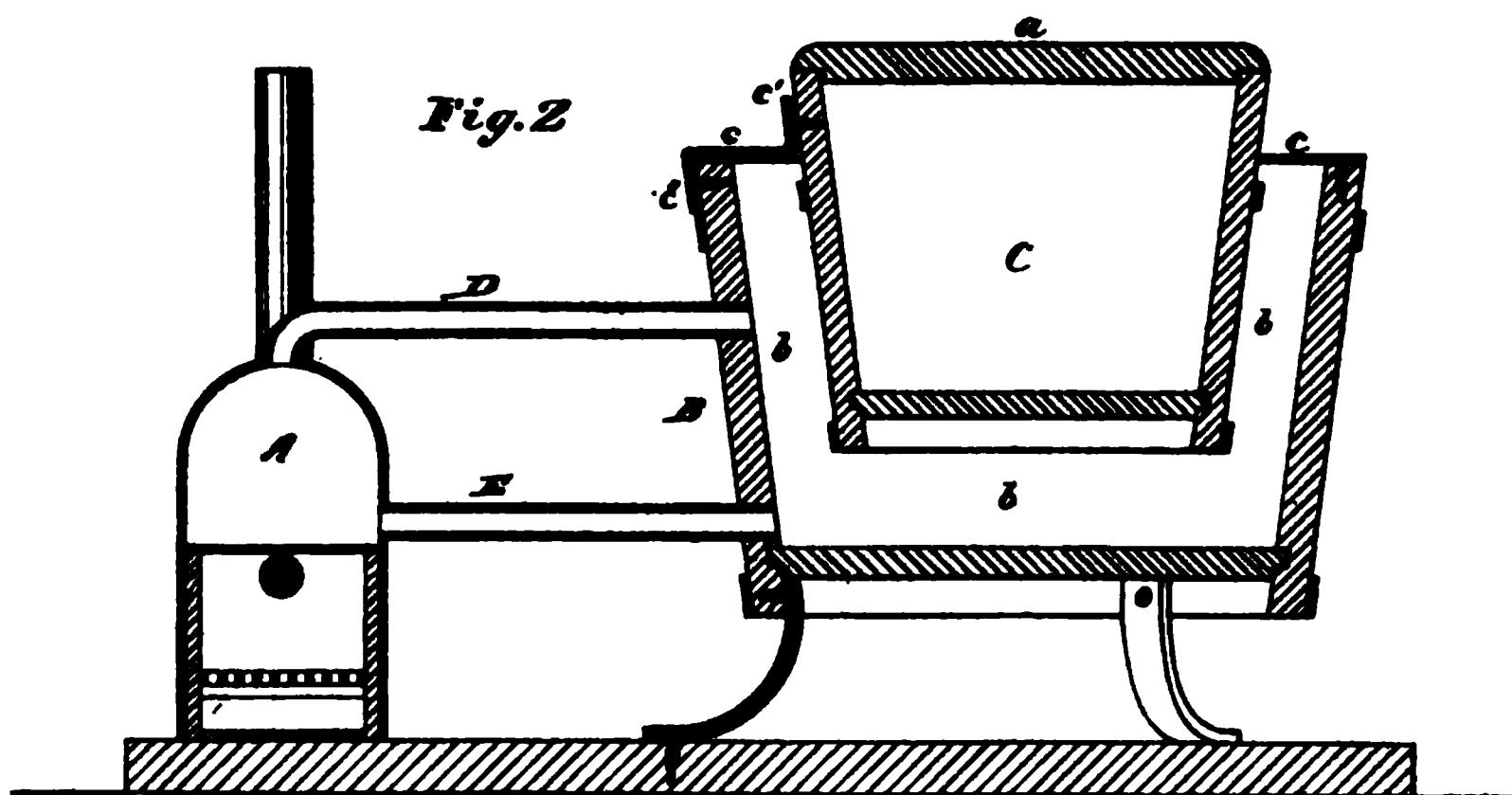


Fig. 2

Attest:
L. E. Schoff
Chas. H. Schoff

INVENTOR:
Abram Robinson
 By *J. H. Harris*, his
 Attorney.

Opinion of the court.

water-pipe leading from the lower part of the said space into the lower part of the boiler. To use this apparatus for the purpose for which it is intended, the water in the boiler should be heated until steam is generated. The tobacco to be treated should be placed in the vessel C and covered, the tobacco then being in the condition in which it exists when taken from the cases or packages in which it may have been packed by the producers or shippers.

“The water, as well as the steam, will enter the space *b* and produce a sufficient temperature in the vessel C to sweat the tobacco therein, the steam producing moisture in the vessel C by sweating or percolating through it from the space *b*, in addition to the moisture originally in the tobacco before it was confined in the vessel. The steam which enters the space *b*, through the pipe D, finding a lower temperature in the said space than in the boiler, becomes condensed, and is added or returned to the volume of water which flows from the said space into the boiler, and thus keeps the latter supplied. A circulation of water and steam is also kept up to a certain extent.

“In a building where steam is supplied through pipes, the steam may be conducted into the space *b* from the boiler which supplies the steam, wherever the boiler may be situated. The tobacco should be exposed to this treatment from three to eight days, according to the result desired to be produced, and it will thus be rendered soft and pliable, and of a uniform and dark color, without being in any way injured. The tobacco prepared in this manner may be manufactured into various articles, like cigars and cigarettes.

“I deem it preferable to make the tank B, as well as the tank C, of wood, so as to prevent tainting the tobacco, and so as to render the apparatus capable of treating large quantities of tobacco at the same time, and without making the apparatus heavy and expensive, and to employ a boiler wholly detached from the tank B, excepting by the steam and water pipes connecting the same, thus enabling me to

Opinion of the court.

make the outer or larger tank of wood without exposing it to danger from fire. A detached boiler amply sufficient to be employed in connection with very large tanks will be comparatively simple and cheap.

“Having thus described my invention, what I claim as new, and desire to secure by letters patent, is—

“1. The apparatus, substantially as described, for treating tobacco, to wit: The tight vessel or tank B, the tight vessel C, made of wood and suspended in the tank B, and a steam-generator or heater, all combined and operating together, substantially as and for the purposes specified.

“2. The combination of the boiler A, the tight tank B, made of wood, the tight vessel C, made of wood and suspended in the tank B, and the pipes D and E entering the tank B and the boiler, all arranged and operating substantially as and for the purposes specified.”

On the hearing in the Circuit Court it was found upon the evidence, that the device used by the defendants differed from that of the complainants, as described in the patent, only in this respect, that the defendants' tobacco-holder is not made tight so as to exclude moisture, except through the pores of the wood; the defendants using the ordinary tobacco cases in which the leaf tobacco comes packed, to hold the tobacco during the process of re-sweating. It was contended on the part of the defendants that this was a substantial difference, because the complainants' claim required their tobacco holder to be tight, while that of the defendants was not. In disposing of the case upon this point, the judge holding the Circuit Court, in his opinion, said: “The essential feature of complainants' invention consists in subjecting the mass of leaf tobacco to moisture and heat in a comparatively close wooden box for a sufficient time to have it undergo the process of re-sweating, and it is no answer to complainants' charge of infringement of their patent to say that defendants' box is not quite so tight as that complainants deem desirable or necessary for the most satisfactory opera-

Opinion of the court.

tion of their device.” Robinson v. Sutter, 10 Bissell 100 ; S. C. 8 Fed. Rep. 828.

The issue as to novelty, upon the proof, was also decided against the defendants, for the reason that the two devices relied upon—one described in the Oppelt patent of June 16, 1874, and the other in the Wenderoth patent of July 16, 1878—both use metal tanks and a metal tobacco-holder. It was shown that contact with metal taints and injures the tobacco operated upon, and that the free admission of steam wets and to some extent cooks the tobacco ; and the conclusion of the Circuit Court was that “ The porous wooden tobacco holder devised by Robinson seems, from the proof, to stimulate that slow fermentation and action in the constituent elements of the leaf which is required to make the whole mass homogeneous.”

Upon a showing made by the defendants, a rehearing of the cause was granted, and further proofs taken. Upon that hearing it was made clearly to appear, from the testimony, that the artificial re-sweating of tobacco had been effected long prior to the application for the complainants’ patent, by means of the application of steam in a chamber adapted for that purpose, applied to the tobacco while in the ordinary tobacco cases in which the leaf tobacco comes packed, just as the defendants were found to have practiced. The case, however, was decided against the defendants upon another ground, as appears from the opinion of the judge holding the Circuit Court. Robinson v. Sutter, 11 Fed. Rep. 798. He said : “ The distinctive feature of complainants’ device for resweating tobacco is the water tank in the bottom of their outer chamber, so that, by keeping this water at the proper temperature, the atmosphere of the outer chamber can be kept warm and humid, whereby the process of re-sweating will be induced and carried on to whatever extent shall be deemed desirable.” The devices used prior to Robinson’s invention, and proven as anticipations, which would avoid his patent for want of novelty,

Opinion of the court.

were found not to meet that point in the description of the complainants' device, inasmuch as the outer tank in each, into which the steam entered for the purpose of heating and moistening the tobacco, had specific provision made in it for drawing off the water formed by condensation of the steam, instead of being arranged so as to hold a body of water in order to equalize and maintain the temperature of the vapor in the room or tank.

The defendants had also introduced in evidence, as an anticipation, a patent granted in 1865 to one Huse. His invention is described in his specification as follows :

“I take the tobacco by preference, after it has been desiccated and packed in the usual manner in hogsheads or cases, and which it is well known are not by any means so close as to exclude steam. I place these hogsheads or cases, or both, in a chamber of convenient size, and which can be closed up steam-tight, and I then introduce heat and moisture by means of steam apparatus, such as generally employed for heating buildings, the coils or congeries of pipe being arranged in any suitable manner for a proper distribution of the heat. Some of the pipes, about one-half of them, are to be pierced with very small holes, to permit the escape of steam into the chamber. It will be found best to raise and maintain the temperature at about 150 degrees Fahrenheit, and for about forty-eight hours for tobacco which has been well desiccated, a longer time being required when treated before it has been well dried. At the end of the time specified, the tobacco should be examined, and, so soon as nicotine is well developed, which will be indicated by the evolution of ammonia, the steam must be shut off, the chamber opened, the hogsheads or cases opened, the tobacco all opened and shaken and thoroughly dried, which is best done in an open and well-ventilated room ; and after it has been well dried the tobacco will be found to be thoroughly cured and ready for use, and further fermentation so completely stopped that it can be repacked and kept for any desired length of time.

Opinion of the court.

“In this way I avoid all the evil consequences of method heretofore practiced, while at the same time it enable the planter to put his crop of tobacco in market comparatively short space of time.

“What I claim as my invention, and desire to secure by letters patent, is the process, substantially as herein described, of curing tobacco, which process consists in subjecting it to the action of artificial heat and steam to induce required fermentation until nicotine is evolved, and stopping the further progress of fermentation by opening the packages and thoroughly drying every part substantially as described.”

In respect to this, the Circuit Court said: “As for Huse patent of 1865, it was only a box heated with steam coils, in which the tobacco was to be placed and heated by the radiation of heat from the pipes and the introduction of live steam.” 11 Fed. Rep. 798

There was, accordingly, a decree entered in favor of the complainants for an injunction, and for the recovery of \$309.30 damages found by the master. The defendants have brought the present appeal.

It sufficiently appears from the evidence that if the essential and sole characteristic of the complainants' invention consists in a substitution of a close wooden box, to hold tobacco while being subjected to the process of re-sweating, for metal tobacco-holders previously in use, either the practice of the defendants in using as a tobacco holder the ordinary tobacco cases in which the leaf tobacco comes packed during the process of re-sweating, is not an infringement, or, if it be so held, the complainants' invention was anticipated by others long prior to its date. This is shown by the Huse patent, and it is proven to have been employed by others, particularly by Louis Specht in the tobacco factory of August Beck & Co., in Chicago.

It only becomes important, therefore, to consider the ground finally taken in support of the decree, which is

Opinion of the court.

volves the question whether the appellees are entitled to claim the water tank in the bottom of the outer chamber, and the use of water in it, whereby the atmosphere of the outer chamber can be kept warm and humid, so that the process of re-sweating may be induced and carried on to any desirable extent. In this connection it becomes important to consider the proceedings in the Patent Office in the granting of the patent, as shown by the file-wrapper. It appears from the transcript of the record in the case that the defendants offered in evidence a copy of this file-wrapper and contents, which was objected to as incompetent and not sufficiently verified. No ruling of the Circuit Court seems to have been made upon the objection, and the paper, although described as marked, "Defendants' exhibit, copy of the file-wrapper and contents of the Robinson patent," is not certified as a part of the evidence, and is not contained in the transcript. It does not, therefore, appear that the paper was ever before the court below, or considered by it in the hearing of the case. In this court, however, on the hearing, by consent of parties, the file-wrapper and contents were ordered to be made a part of the record. From that paper it appears that the original specification, on which the application for a patent was based, declared that the petitioner had invented certain new and useful improvements in the method as well as apparatus for steaming leaf tobacco. In setting out the object of the invention, he said: "The object of this invention is to provide suitable means whereby the leaves may be subjected to the process of sweating by means of steam or water under the influence of heat, and to that end my invention consists of that process and in the apparatus by means of which I carry on the said process, substantially as hereinafter specified."

It was also stated, that "B is a tank or vessel for containing water and receiving the steam generated by the boiler A;" and that "steam may also be generated in the space by filling the latter partly with water, and by applying heat

Opinion of the court.

Amendments were also made by inserting other parts of the specification as it now stands; amongst others, the following: "I make the vessel C of wood, as an essential feature of my invention, in order that the steam may sweat or percolate through it from the tank B, and so that the tobacco will not be tainted by contact with the metal." And also the following: "The steam-producing moisture in the vessel C, by sweating or percolating through it from the space *b*, in addition to the moisture originally in the tobacco before it was confined in the vessel."

On the 10th of April, 1879, the examiner informed the applicant that he "should specifically set forth that the structural plan of the device is old, and that the improvement consists alone in making the vessel C of wood instead of metal, and sufficiently porous to permit the steam to percolate through it."

Thereupon the applicant filed an amendment by inserting the following: "I am aware that the general structural plan of the apparatus hereinbefore described is old, excepting that the vessel C for receiving the tobacco has not, so far as I am aware, heretofore been made of wood, but of metal. The making of the vessel C of wood, and sufficiently porous to permit the steam to percolate through it, constitutes the essential feature of this invention. When metallic vessels are employed to receive the tobacco, it is liable to be tainted, and in such cases is merely heated, but not subjected to the moistening influence of steam or vapor percolating through the vessel containing the tobacco, as when this vessel is made of wood sufficiently porous to admit of that result. I do not, therefore, here intend to claim the general structural plan of the said apparatus independently of a vessel, C, made of wood, sufficiently porous to allow the steam to percolate through it."

On the 24th of April, 1879, the examiner wrote to the applicant as follows: "The specification should be amended by omitting all statements that the applicant has an im-

Opinion of the court.

proved process or is the inventor of such. * * * The statement of invention, and reference to the state of the art, both require correction, as the invention is an improved apparatus only."

Thereupon further amendments were made, resulting in the specification and claims as they now stand, and the patent was granted.

A comparison of the patent as granted with the application very conclusively establishes the limits within which the patentee's claims must be confined. He is not at liberty now to insist upon a construction of his patent which will include what he was expressly required to abandon and disavow as a condition of the grant. *Shepard v. Carrigan*, 116 U. S. 593 [p. 235 *ante*,] and cases there cited. It appears, therefore, distinctly that the patentee has no claim for a process of steaming tobacco by means of steam, or steam and a body of hot water, nor by any process whatever. His invention must be limited to the apparatus, and as to that he was expressly required to state that its structural plan was old and not of his invention. What is meant by the structural plan of the apparatus is the arrangement of the vessels for holding the tobacco, for confining the steam and water, and for supplying the steam; and the precise improvement which is alone the subject of the patent is the substitution of a wooden vessel for holding the tobacco, while being re-sweated, in place of a metallic one. So that the ultimate question in the case is reduced to this, whether, in such an apparatus, the use of the cases, or boxes, or packages, in which the tobacco leaves are originally packed by the producer is equivalent to the wooden tobacco holder mentioned in the complainants' specification. If it is not, there is no infringement; if it is, as we have already seen, it had been anticipated for many years by the practice of other persons. It is expressly described in the Huse patent of 1865, where the inventor states, as follows: "I take the tobacco, by preference, after it has been desiccated and packed in the usual

Notes and citations.

manner in hogsheads or cases, and which it is well known are not by any means so close as to exclude steam. I place these hogsheads or cases, or both, in a chamber of convenient size, and which can be closed up steam-tight, and I then introduce heat and moisture by means of steam apparatus, such as generally employed for heating buildings, the coils or congeries of pipe being arranged in any suitable manner for a proper distribution of the heat. Some of the pipes, about one-half of them, are to be pierced with very small holes to permit the escape of steam into the chamber." And the same thing was done at the establishment of August Beck & Co., in Chicago, before the date of Robinson's application, and by several others.

For these reasons we are of opinion that the decree below was erroneous. *It is, therefore, reversed, and the cause remanded, with instructions to dismiss the bill.*

119 U. S. 542.

Notes:

2. Amendments to application as evidence in the construction of the patent :

Hopkins Mnfg. Co. v. Corbin, 103 U. S. 786 [13 Am. & Eng. 147.]

Sargent v. Hall Safe & Lock Co., 114 U. S. 63 [15 Am. & Eng. 573.]

Shepard v. Carrigan, 116 U. S. 593 [p. 235 ante.]

Crawford v. Heysinger, 123 U. S. 589.

Patent in suit:

No. 216,293. Robinson, A. June 10, 1879. Tobacco Re-sweating Apparatus.

Notes and citations.

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Patent in suit:

No. 216,293. Robinson, A. June 10, 1879. Tobacco Re-sweating Apparatus.

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Argument of counsel.

air holes and the number of solid parts between them is not of the essence of complainant's patent, and that, therefore, the difference is immaterial.

The claim of the patent is not for a function. It is for a combination of parts.

It is essential to the patent that the plate A' be a top plate to the water vessel, so that no portion of it can be rusted away by water. It is essential, likewise, that that top plate have holes in it for the purpose of letting air pass through these holes. It is essential, likewise, that that top plate have an innermost portion or annulus for the support of the hot-air drum. And it is, moreover, essential that the said top plate constitute the support for a hinge, *back or outside* of said ring or annulus, by which it is combined and connected with the hot-air drum.

These essential features are all found in the defendants' structure, and, being there, make it an infringement of complainant's patent.

Mr. B. F. Lee, for appellees :

Each element of the patented combination is old, except, possibly, the top plate A' in the exact form and location of the patent.

But even if some of said elements had been new, the familiar rule of law, that all the elements making up the combination must be used by the defendants in order to constitute an infringement, is decisive of this case. *Union Water-Meter Co. v. Desper*, 101 U. S. 332 [12 Am. & Eng. 380 ;] *Railroad Co. v. Mellon*, 104 U. S. 118 [13 Am. & Eng. 200.]

An examination of the claim shows that it is, on its face, a mere aggregation and not a combination.

Unless all the elements co-operate to produce a new and patentable result, the subject matter is not patentable.

Reckendorfer v. Faber, 92 U. S. 347 [10 Am. & Eng. 373 ;] *Hailes v. Van Wormer*, 20 Wall. 353 [9 Am. & Eng. 340.]

Opinion of the court.

Mr. Justice BLATCHFORD delivered the opinion of the court :

This is a suit in equity brought for the alleged infringement of letters patent, No. 177,334, granted to Abner B. Hutchins, May 16, 1876, for an improvement in hydro-carbon stoves. The specification and drawings are as follows :

“ The object of this invention is to produce a stove which can safely and easily be heated by the combustion of a hydro-carbon or oil in a similar manner to that in common use in illuminating lamps.

The invention consists of the following devices: The vessel or chamber containing the oil or hydro-carbon is submerged in water, so as to always keep the said oil vessel or chamber cool, and thereby free from explosive or other accident. The water vessel is covered with a perforated metal plate, which forms the base of the hot-air cylinder, on the top of which the culinary or other vessels to be heated are placed. Vertical tubes or flues are placed in the hot-air cylinder in such positions as to act as chimneys for the burners. Mica windows are placed in the sides of these flues or chimneys in such positions as to enable the operator to observe the flame of the burner and to regulate the same as circumstances may require.

The invention will be readily understood by reference to the accompanying drawings, of which Figure 1 is partly an elevation and partly a vertical section of the improved stove. Fig. 2 is partly a plan and partly a section of the same. In this view the half of the top plate only is removed, so as to disclose the construction of the hot-air cylinder and the flues or chimneys. Fig. 3 is a sectional plan of the stove, taken just below the top plate of the water chamber, and showing a part of the top plate of the oil vessel or reservoir broken out.

The base of the stove consists of a vessel, A, resting, for convenience, on short legs *a*. This vessel is intended to contain water, and has a top plate, A', which is preferably

Opinion of the court.

made of cast metal, and strong enough to support all the parts of the stove which are above it. This plate A' is annular in form if the stove is of general cylindrical construction (which is preferable to other forms,) the central opening in the said plate being nearly equal in area to the sectional area of the hot-air cylinder C, which rests upon it. Concentrically arranged around this central opening is a series of perforations, a' , through which atmospheric air passes down into the top part of the vessel A, and thence up through the hot-air cylinder and its chimneys.

The reservoir or vessel B, in which the oil or hydro-carbon is put for use in this stove, is placed within the vessel A, and the bottom of the vessel A may likewise constitute the support for the bottom of the vessel B, and there will be an intervening chamber, B', between the sides of the vessel B and its inclosing vessel A, and the sides of the vessel A will extend up one or two inches (more or less) above the top of the vessel B. While in use the annular chamber B' will be filled with water, and water will also cover the top of the vessel B, which said vessel and its contained fluid will thereby be always kept at a low temperature, and accident from the ignition or explosion of the oil or hydro-carbon will thus be rendered impossible by this water covering. A tube, b , extends from the vessel B up through one of the perforations or apertures a' , and serves as a means of filling the vessel B. A suitable screw-cap closes the top end of this tube. A pipe or valve a'' , leans from the chamber B' to the outside of A, for the purpose of drawing off the water when it becomes heated, or when the occasion requires it. Water may easily be poured into the vessel A through the apertures a' .

The wick-tubes D are attached to the top of the vessel B, and the wick used to conduct the oil from B to the flame is operated in the usual manner of illuminating lamps. The rollers for moving the wicks up and down are inclosed in casings or housings E, and are operated by the thumb-

Opinion of the court.

The top of the hot-air cylinder is covered with a cast metal plate, L, that serves as a rest for whatever vessel is to be heated on this stove. The plate L is perforated with apertures over the chimneys, and also over the hot-wells of the cylinder C, as well as in the portions lying outside of the cylinder thus permitting all of the heat generated to reach the vessel on top of the plate L, and thereby be utilized. The intense heat imparted to the plates of the chimneys I and plate L, and reflected thence back upon the hot gases passing through and about these parts, will be quite sufficient to consume all of the smoke, and there will, in consequence, be no emission of unpleasant odors from imperfect combustion. The top surface of the plate L is provided with ridges l, that keep the vessels placed thereon from obstructing the openings in the said plate."

The claims are these—

"1. The water vessel A, with its perforated top plate A' and hot-air cylinder C, hinged at c to plate A', and top perforated plate L, all arranged and connected together substantially as and for the purpose set forth.

2. The chimneys I, having one of their sides formed by the hot-air cylinder C, to which they are connected by the groove-clips k, that also receive the mica windows K, as and for the purpose set forth."

It is contended that the defendants infringe the first claim. The Circuit Court dismissed the bill (15 Fed. Rep. 919,) holding that there was no infringement. The plaintiff has appealed.

One of the elements in the first claim is the "perforated top-plate A'," being the top plate to the water-vessel A. It is described as annular in form, if the stove is cylindrical, with a central opening. The specification then says: "Concentrically arranged around this central opening is a series of perforations, a', through which atmospheric air passes down into the top part of the vessel A, and thence up through the hot-air cylinder and its chimneys." In the defendant's

Notes and citations.

Cited :

IN CIRCUIT COURTS IN :

Hill v. Sawyer, June, 1887. 31 Fed. Rep. 282.

Smith v. Thomson, May, 1889. 38 Fed. Rep. 604.

IN TEXT BOOKS:

Walker on Pats., 2d ed. 1889. p. 270.

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Syllabus.

HOBART B. IVES, APPELLANT, *v.* JOSEPH B. SARGENT.*

119 U. S. 652-663. Oct. Term, 1886.

[Bk. 30, L. ed. 544; 38 O. G. 781.]

Affirming *Ibid*, 21 Blatch. 417.

Argued December 15, 1886. Decided January 10, 1887.

Particular reissued patent. Reissue with broader claims. Mistake of solicitor. New matter.

1. The third and fourth claims of reissued letters patent, No. 9,901, granted to Davis, October 18, 1881, (original No. 202,158, April 9, 1878,) for Door Bolts, declared invalid on the ground that a delay of nearly three years after the date of the original patent before applying for its reissue with broader claims was not excused by the mistake of the solicitor who applied for and procured the original patent with claims more narrow than those which he was instructed by the inventor to make. (p. 524.)
2. *Held*, further, that an element of the invention (the pitman) shown in the original drawings only as a connected portion of a certain mechanism and so described in the original patent, but described in the reissue as an independent invention was new matter, and claims based thereon are invalid. (p. 526.)

[Citations in the opinion of the court:]

Ives *v.* Sargent, 21 Blatch. 47. p. 523.Wollensak *v.* Reiher. 115 U. S. 96 [p. 162 *ante*.] pp. 524, 525.Mahn *v.* Harwood, 112 U. S. 354 [15 Am. & Eng. 322.] p. 525.Coon *v.* Wilson, 113 U. S. 268 [15 Am. & Eng. 504.] p. 527.

Appeal from the Circuit Court of the United States for the District of Connecticut.

The history and facts of the case fully appear in the opinion of the court.

See Explanation of Notes, page III.

Opinion of the court.

Mr. John S. Beach, for appellee :

All the elements, either of which, has so often been recognized by this court as fatal to the validity of a reissue are combined in this reissue. 1. The reissue was not applied for until more than two and a-half years after the original patent was granted. 2. Its claims were expanded to include an invention not hinted at in either of the claims of the original patent. 3. For months before the reissue was applied for, appellee had lawfully manufactured, and the public had rightfully dealt in, the thing which is now presented to this court by the appellant as an infringement of his exclusive rights under the expanded claims of his reissue.

The same fatality to the patentee results whether the laches are due to his fault in not taking prompt action to protect his known rights, or to his negligence in not using the means and opportunities to inform himself as to what his rights are.

Hoyt v. Sprague, 103 U. S. 613; *Arnheim v. Finster*, 26 Fed. Rep. 280.

Even in exceptional cases, where there has been no actual fault or positive negligence, laches—if that term can properly apply to such a case—will defeat the effort of a patentee to expand the claim of his original patent, to the prejudice of the public, when its rights have been intervened between the date of the patent and the application for a reissue.

Boland v. Thompson, 26 Fed. Rep. 634.

Mr. Justice MATTHEWS delivered the opinion of the court :

This is a bill in equity filed by the appellant to restrain the alleged infringement of the complainant's rights, as the assignee of Frank Davis, of reissued letters patent No. 9,901, for an improvement in door bolts. The original patent was No. 202,158, dated April 9, 1878. The application for the reissue was filed April 1, 1881, the reissued letters

Opinion of the court.

patent being dated October 18, 1881. The alleged infringement is of the third and fourth claims. As the case turns wholly upon the validity of the reissued patent it is important, for purposes of comparison, to set out the original and the reissue in parallel columns. So much of the original as is excluded from the reissue is marked in brackets, and the additions made by the reissue are in italics. They are as follows:

Original.

"Specification forming part of letters patent, No. 202,158, dated April 9, 1878. Application filed January 29, 1878.

To all whom it may concern:

Be it known that I, FRANK DAVIS, of North Adams, in the County of Berkshire and State of Massachusetts, have invented certain new and useful improvements in door bolts; [and I do hereby declare that] the following is a [full, clear, and exact] description [of my invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.]

[This invention is an improvement] on letters patent [No. 190,561,] granted to [the undersigned] May 8, 1877.

The [nature of said] invention consists [chiefly] in com-

Reissue.

"Specification forming part of reissued letters patent, No. 9,901, dated October 18, 1881. Original No. 202,158, dated April 9, 1878. Application for reissue filed April 1, 1881.

To all whom it may concern:

. Be it known that I, FRANK DAVIS, of North Adams, in the County of Berkshire and State of Massachusetts, have invented certain new and useful improvements in door bolts, *of which* the following is a description.

The improvements are on the door bolt, for which letters patent *were* granted to *me* May 8, 1877.

The invention consists in combining a cylindrical outer

binning a casing with constructed hereinafter [casings] co the operat and to for guide there binning with bolt, pitma constructed to operate out pivot tional device after more and claimed

In the acc ings Fig. device as a tive. Fig. perspective [casing and 3 is a [detai [and its at 4 is a detail [casing.] I view of the

[A design metallic sleeve, whic opposite op rear end, as for attachn screw *a'* to

It is o known equ may be su screw. Sai ferably a n

Opinion of the court.

socket, *b'*, for the reception of fastening screw *a'*.

C designates the door bolt, having guide pins *c* on its side, and near its rear end a recess, *c'*, in which works the lower end of crank arm *D'*, formed in one piece with flat hub *D*. Said lower end of crank arm *D'* is connected by pitman *E* to the front part of said bolt. Said hub *D* when in position for use, extends up through said slot *b'*, so that its square or similarly shaped central hole is in a line with transverse groove *b'* of inner casing *B*, and opposite holes *a a* of outer casing *A*. The prismatic shank of the key is passed through said holes and groove, and operated as usual to shoot or draw the bolt.

I do not confine myself to the exact details of construction shown, as these may be somewhat modified in various ways without departing from the spirit of my invention.

The working parts of my mechanism are more firmly secured and more perfectly protected than in my former patent, as hereinbefore recited. I also deem the shape of my new hub and crank preferable for practical working.]

Having [thus] described my [invention], what I claim as new, and desire to protect by letters patent, is—

ends are bent at right angles to its length and pass into holes in the bolt and crank, the spring being made long enough for the purpose. The lug c on the bolt is so arranged relative to the connections of the spring as to give it the required degree of tension or "set up," as it is called. The tension bends the spring over the lug c, as shown in Fig. 3. The key has its shank square to fit the hole in the crank, with a round part near the handle to turn in the case, as shown in Fig. 1.

Having described my improved bolt and its mode of operation, what I claim as new, and desire to secure by letters patent, is—

F. DAVIS.
Door-Bolt.

No. 202,158.

Patented April 9, 1878.

Fig. 1.

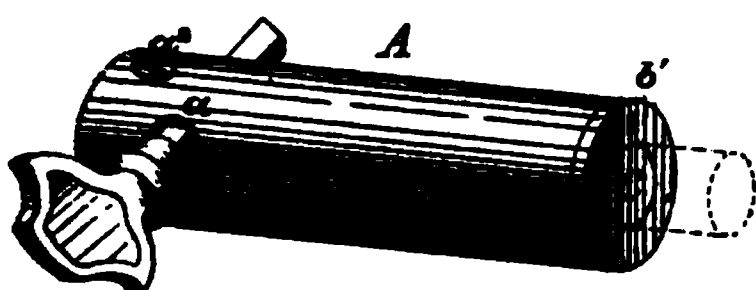


Fig. 2.

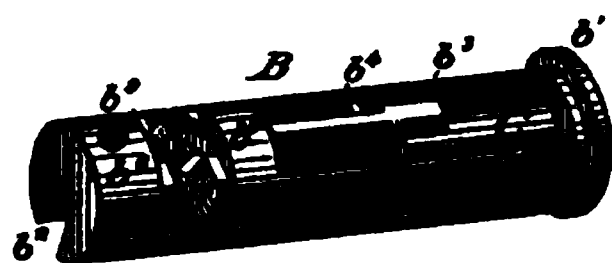


Fig. 3.

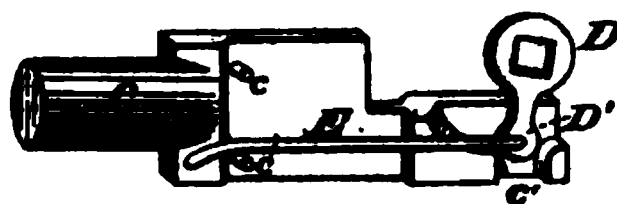


Fig. 4.

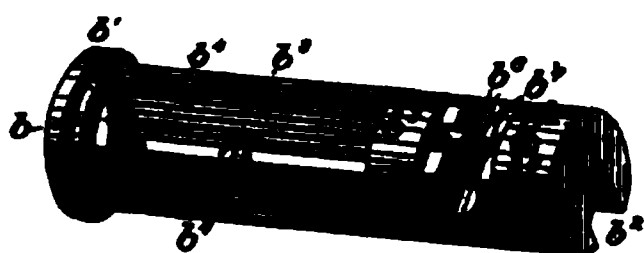
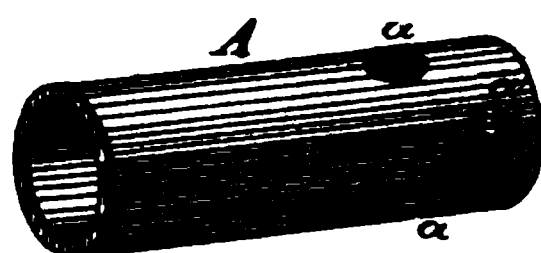


Fig. 5.



Attest:

E. J. Smith
Wm B. Hale.

Inventor:

Frank Davis
by
W H Babcock,
Attorney.

Opinion of the court.

1. The combination, with a door bolt and operating mechanism, of a cylindrical exterior [casing,] and a recessed inner [casing,] said [casings] combining to inclose the operating mechanism, and to form a fulcrum and guide therefor substantially as set forth.

2. The combination of [casing] A, having opposite holes *a a*, with inner [casing] B, having transverse groove *b'* and slot *b'*, [flat hub] D, [having crank arm D',] and the bolt and pitman, substantially as set forth.

[3. The combination of cylindrical outer casing A with inner casing B, having annular front flange *b'*, side walls *b' b'*, transverse partitions *b'* and *b'*, transverse groove *b'*, and slot *b'*, said casings being securely fastened together and adapted to receive the bolt and working mechanism, substantially as set forth."]

1. The combination, with a door bolt and operating mechanism, of a cylindrical exterior *case* and a recessed inner *case*, said *cases* combining to inclose the operating mechanism, and to form a fulcrum and guide therefor, substantially as set forth.

2. The combination of *case* A, having opposite holes *a a*, with inner *case* B, having transverse groove *b'* and slot *b'*, *crank*, D, and the bolt and pitman, substantially as set forth.

3. *The combination of the bolt C, provided with the lug c, pitman E, operating as a pitman and spring, and crank D to hold the bolt, substantially as set forth.*

4. *In a cylindrical door bolt, the pitman E, arranged and adapted to operate as a pitman and spring, substantially as set forth."*

It will be observed that the first and second claims of the reissued patent are substantially the same as the first and second claims of the original patent; but as there is no allegation or proof of any infringement by the appellee, of either of these, they may both be dismissed from further consideration. The third claim of the original patent is omitted from the reissue, its place being taken by the third and fourth claims of the latter. The whole question is whether the patentee and his assignee are entitled, under the circumstances of the case, to claim the pitman E, operating as a pitman and spring in a door bolt, as a distinct

Opinion of the court.

and separate invention, irrespective of its combination with the exterior and interior cases mentioned in the first and second claims. This right is affirmed by the appellant and denied by the appellee.

The invalidity of the reissued patent is maintained by the appellee on two grounds: (1) that the reissue embraces a different invention in the third and fourth claims from any described or contained in the original specification; and (2) that, if it were otherwise, the patentee and assignee had, at the time of the application for a reissue, lost their rights to correct the defects in the original by their own laches. It was upon the latter of these grounds that the circuit court proceeded in dismissing the bill. The undisputed facts on this part of the case are stated by the circuit court in its opinion and are as follows:

“The inventor, a carpenter by trade and not an educated man, invented the device in November, 1877, and applied, in January, 1878, to Mr. Terry, a patent solicitor in New Haven, to procure him a patent, specifying, as the invention to be patented, the pitman, which, in connection with the crank, held the bolt and answered the double purpose of pitman and spring. Terry, being in ill health and therefore not then doing business, sent the case to his agent in Washington, with Davis' instructions. In due time the papers were returned to Terry and were signed by Davis, who read them and supposed that the application ‘covered the spring which he intended to be patented.’ Terry did not read the application. The patent was received by Davis in April, 1878. It does not appear whether it was then examined or not. The plaintiff did not see the patent until after it was assigned to him, on May 28, 1879. Whether he

Opinion of the court.

1878 the plaintiff received from Davis a license to use the pitman spring upon another than the patented bolt. In September, 1880, Sargent & Co. commenced work upon the patterns for the infringing bolt, and made the first bolts December 1, 1880." *Ives v. Sargent*, 21 Blatch. 417.

The application for the reissue was not made until after the lapse of nearly three years from the date of the original patent; that is, from April 9, 1878, until April 1, 1881. It may be assumed, as the effect of the evidence, that Davis in describing to his solicitor, Terry, the invention which he wished to have patented, specifically designated and described the pitman spring as his substantial invention, distinct from the combination of which it formed a part in the first and second claims of the patent. In his testimony on this point, in answer to the question, "What did you describe to him as the invention which you wished to have patented?" Davis states, "I explained to Mr. Terry that I had got the spring, answering for a spring and also for turning the bolt—a pitman spring. I didn't know the term at that time;" and also that he wished to have patented "this pitman spring, and this guard, lever, and that purchase it had in holding the bolt out or back; also, in moving the bolt out and back." Terry also, on the same point, says that Davis "brought the invention or bolt to me and stated that he wanted to get it patented. He also stated what his invention was, as he considered it, that he wanted patented, and the thing that he wanted patented particularly was the pitman or connecting rod, which answered the double purpose of pitman and spring, and in connection with the crank held the bolt when it was shoved out of the case and when it was drawn within the case." Terry also states that he sent "a letter of instructions with the model, setting forth Mr. Davis' wishes as he had expressed them to me." The specification, as prepared by the solicitor in Washington, was returned to Terry and by him exhibited to Davis, who signed the application, as he states, after he

Opinion of the court.

had examined it and supposed it to be right, "covering the spring which I intended to be patented." Mr. Terry states that he does not recollect whether he himself read over the specification and examined the claims at the time Mr. Davis signed the papers, or not. On this application the patent was issued, and it does not appear to have been read or examined by any of the parties in interest until after the appellee commenced making the bolts now alleged to be an infringement. It was then discovered for the first time that the original patent did not cover the claim as now made, and the reissue was obtained to effect that purpose.

It is admitted in argument by the counsel for the appellant that there was negligence; it is contended, however, that it was not the negligence which in law is imputable to the patentee or the appellant, but the negligence of the solicitor employed by the patentee to obtain the patent. Counsel say, "It was the Washington solicitor's disobedience to instructions which caused the mistake, and Terry's neglect to revise the application before sending for Davis to sign it, which prevented its discovery."

The rule of diligence required in such cases, as the result of previous decisions of this court, is stated in *Wollensak v. Reiher*, 115 U. S. 96, 99 [p. 162 *ante*,] in these words: "It follows from this, that if, at the date of the issue of the original patent, the patentee had been conscious of the nature and extent of his invention, an inspection of the patent, when issued, and an examination of its terms, made with that reasonable degree of care which is habitual to and expected of men in the management of their own interests in the ordinary affairs of life, would have immediately informed him that the patent had failed fully to cover the area of his invention. And this must be deemed to be notice to him of the fact, for the law imputes knowledge when opportunity and interest, combined with reasonable care, would necessarily impart it. Not to improve such opportunity, under the stimulus of self-interest, with reasonable diligence, con-

Opinion of the court.

stitutes *laches*, which in equity disables the party who seeks to revive the right which he has allowed to lie unclaimed from enforcing it to the detriment of those who have in consequence been allowed to act as though it were abandoned."

In *Mahn v. Harwood*, 112 U. S. 354, 362 [15 Am. & Eng. 322,] it was stated that "If a patentee has not claimed as much as he is entitled to claim, he is bound to discover the fact in a reasonable time or he loses all right to a reissue; and if the Commissioner of Patents, after the lapse of such reasonable time, undertakes to grant a reissue for the purpose of correcting the supposed mistake, he exceeds his power, and acts under a mistaken view of the law; the court, seeing this, has a right, and it is its duty, to declare the reissue *pro tanto* void in any suit founded upon it."

It is also settled that while no invariable rule can be laid down as to what is a reasonable time within which the patentee should seek for the correction of a claim which he considers too narrow, a delay of two years, by analogy to the law of public use, before an application for a patent, should be construed equally favorable to the public, and that excuse for any longer delay than that should be made manifest by the special circumstances of the case. *Wollensak v. Reiher*, and *Mahn v. Harwood* [*supra*.]

In the present case no special circumstances in excuse for the delay are alleged. The excuse proffered is simply an attempt to shift the responsibility of the mistake, as originally made, from the patentee to his solicitor; but no excuse is offered why the patentee did not discover the negligence and error of his solicitor in due time. On the contrary, he assumed, without examination, that the specification and claims of his patent were just what he had desired and intended they should be, and rested quietly in ignorance of the error and of his rights for nearly three years, and then did not discover them until after others had discovered that he had lost the right to repair his error by his neglect to assert it within a reasonable time.

Opinion of the court.

We are therefore of opinion that the circuit court was clearly in the right in deciding the reissue void as to the third and fourth claims, on the ground that the right to apply for it had been lost by the laches of the patentee and his assignee.

We are also of opinion, however, that the reissue is void on the other ground; viz., that it contains new matter introduced into the specification, and that it is not for the same invention as that described in the original patent. In support of the reissued patent, on this ground, it is contended, on the part of the appellant, that the invention of the pitman-spring device is shown in the drawings, which are the same both in the original and the reissued patents. All that can be said in respect to the drawings is that they show the pitman-spring device as a part of the bolt intended to be covered by the patent, and described as a combination of which that device forms a part. There is nothing whatever in the drawings to show that the patentee claimed to be the inventor of that part separate from the combination, as a distinct novelty, useful by itself, or in any other combination; neither is it so described in the specification. The operating mechanism of the bolt, as distinct from the casings, which are described as forming a fulcrum and guide to it, is described as "a bolt, pitman, and hub so constructed and arranged as to operate in the same (said casings) without pivot pins or any additional devices." It is argued, on this language, that the only additional device usual in such cases is a spring, and that, therefore, the meaning of the specification is that no separate spring was required, and from that the inference is to be made that the pitman should operate both as a pitman and a spring; but this inference is entirely too obscure and remote. It is not obvious that the additional device referred to was a spring, and there is nothing in the language to suggest, what is clearly and fully expressed in the amended specification, that "the pitman and spring E, Figure 3, is a straight,

Notes and citations.

hard-drawn wire, and is connected to the bolt and crank by suitable pivotal connections." So that in the original description there is nothing to show of what material the pitman is made so as to operate as a spring, and there is no assertion in it of its performing the double function of pitman and spring.

In this view, therefore, the case comes within the rule as stated in *Coon v. Wilson*, 113 U. S. 268, 277 [15 Am. & Eng. 504.] There, as here, the lapse of time and laches based upon it were considered immaterial, because the reissued patent was for a different invention from that described in the original. "The description had to be changed in the reissue, to warrant the new claims in the reissue. The description in the reissue is not a more clear and satisfactory statement of what is described in the original patent, but is a description of a different thing."

We are therefore constrained to the conclusion that the addition of the third and fourth claims, with the corresponding alterations in the specification, is such an expansion of the invention as originally described as to destroy its identity, and to that extent to avoid the reissued patent.

For these reasons, the decree of the Circuit Court is affirmed.

119 U. S. 663.

Notes :

1. Correction by reissue of solicitor's mistake :

Hartshorn v. Saginaw Barrel Co., 119 U. S. 664 [p. 530 *post.*]

Patent in suit :

No. 202,158. Davis, F. April 9, 1878. Reissue, No. 9,901, October 18, 1881. Door Bolt.

Notes and citations.

OTHER SUITS ON SAME PATENT :

Ives v. Sargent, 1883. 21 Blatch. 417; 17 Fed. Rep. 447.

Cited :

IN SUPREME COURT IN :

Parker & Whipple Co. v. Yale Clock Co., 1887. 123 U. S. 87; Bl.
31 L. ed. 100.

IN CIRCUIT COURTS IN :

Gunn v. Savage, March, 1887. 30 Fed. Rep. 366.

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Syllabus.

STEWART HARTSHORN, APPELLANT, v. SAGINAW
BARREL COMPANY ET AL.*

119 U. S. 664-679. Oct. Term, 1886.

[Bk. 30, L. ed. 539; 39 O. G. 540.]

Argued November 30, 1886. Decided January 10, 1887.

*Particular patents. Void reissue claim. Absence of invention.
Mechanical equivalents.*

1. Where, through a mistake of the solicitor, letters patent, No. 62,502, September 3, 1867, Curtain-Fixtures, was issued with a broad claim to S. Hartshorn, the junior inventor, and letters patent, No. 69,176, September 24, 1867, Curtain-Fixtures, was issued with a limited claim to Wm. Campbell, the prior inventor, and both patents were reissued within two years of the discovery of the mistake, with an exchange of the claims, Hartshorn's as No. 7,370, October 31, 1876, and Campbell's as No. 7,367, October 31, 1876, *held*, that Campbell's acquiescence for nine or ten years in Hartshorn's original claim is regarded as an abandonment by him of any right to such claim, and he cannot resume the same. It is no answer to this view that the invention was not dedicated to the public by Campbell, because it was covered in the interim by Hartshorn's claim, since Hartshorn never had a right to the claim. As Campbell had the right to an interference with Hartshorn, when the original applications were pending, and did not avail himself of that right, but acquiesced in the claim of Hartshorn, he cannot afterward claim that which he voluntarily abandoned. (p. 548.)
2. *Held*, further, that the specification in Campbell's original patent, No. 69,176, having been so changed in his reissue, No. 7,367, of October 31, 1876, as to admit of a claim which could not have been made in the original specification, that there has been a substantial alteration, and the claim based thereon is void. (p. 549.)
3. The claim of Hartshorn's reissue, No. 7,370, of October 31, 1876,

* See Explanation of Notes, page III.

Statement of the case.

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Statement of the case.

to its extension a^x , and the spring is wound up by pulling down the shade B; consequently, when the shade is fully down the spring will have a tendency to wind it up. The pawl or detent F engages itself with, and disengages itself from, the notched hub D automatically.

In the construction shown in the drawing, in order to insure the pawl engaging with the hub, the motion of the shade is simply checked; for, by having the roller A and its disk c rotate slowly, the pawl will drop into the notch b ; but when such roller and disk are allowed to rotate rather quickly the pawl or detent will not drop into such notch, as its loose end will be carried, by the revolution of the roller, toward the periphery, or away from the notched hub; but, by changing or checking the revolution of the roller, the pawl will at once automatically drop into the notch and arrest the roller and shade. Hence the shade may be retained at any desired height without any difficulty whatever, as in the roller described in the previous patent, by merely varying or changing, through the simple manipulation of the shade, the speed of the rotation of the roller, and the consequent movement of the shade.

The pawl or detent F is a hinged or pivoted pawl, as distinguished from a loose pawl moving in a chamber or guide of some form to keep it in position.

I do not claim, generally, the arrangement of both the pawl and ratchet upon or in connection with the roller, so that the roller can be removed from its brackets without permitting the spring to unwind, as I believe such an arrangement of pawl or detent and ratchet, as shown in the patent of William Campbell, granted to him September 24, 1867, had been known previous to being made by myself.

What is claimed as new is—

In a spring shade-roller having a pawl or detent and ratchet, or their equivalent, constructed and arranged so as to engage automatically for holding the shade at any desired point or height, the combination, with a ratchet, or its equivalent, upon the stationary spindle or stationary

Argument of counsel.

part of the fixture, of a hinged or pivoted pawl, placed upon the end of the roller, and acting substantially at right angles to the ratchet or notched hub.

STEWART HARTSHORN.

Witnesses :

S. D. LAW,

A. S. GURLITZ.

Messrs. James T. Law and S. D. Law, for appellant :

The statute only requires that the reissue shall be "for the same invention," and does not, directly or by implication, impose any condition that the description or claims should be the same in the reissue as in the original.

"The specification may be amended so as to make it more clear and distinct ; the claim may be modified so as to make it more conformable to the exact rights of the patentee, but the invention must be the same. * * * The danger to be provided against was the temptation to amend a patent so as to cover improvements which might have come into use, or might have been invented by others, after its issue."

Powder Co. v. Powder Works, 98 U. S. 126 [12 Am. & Eng. 201 ;] Siebert Oil Cup Co. v. Harper Steam Lubricator Co., 4 Fed. Rep. 328.

The specification may be amended.

Powder Co. v. Powder Works, *supra*.

Both specification and claim may be corrected.

Wilson v. Coon, 18 Blatch. 532 ; Smith v. Merriam, 6 Fed. Rep. 713.

New claims may be added.

Miller v. Brass Co., 104 U. S. 350 [13 Am. & Eng. 303 ;] James v. Campbell, *Id.* 356 [13 Am. & Eng. 341 ;] Combined Pat. Can Co. v. Lloyd, 11 Fed. Rep. 149.

A claim may be enlarged in a reissue, at least when an actual mistake has occurred.

Miller v. Brass Co. and James v. Campbell, *supra* ; Yale Lock Mnfg. Co. v. Scoville Mnfg. Co., 3 Fed. Rep. 288.

Opinion of the court.

When an actual mistake has occurred no presumption of abandonment would seem to exist.

Miller v. Brass Co., *supra*; Giant Powder Co. v. Cal. Powder Co., 4 Fed. Rep. 720.

Mr. Charles J. Hunt, for appellees:

Merely bringing old devices into juxtaposition, and then allowing each to work out its own effect without the production of something novel, is not invention.

Hailes v. Van Wormer, 20 Wall. 353 [9 Am. & Eng. 340.]

A combination to be patentable must produce a different force, or effect or result in the combined forces or processes, from

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Opinion of the court.

or point within the scope of its movement by a single manipulation of the shade, the usual cord for operating or turning the shade roller being dispensed with entirely, as well as counterpoises, which had in some instances been employed, in connection with spring rollers, for holding the shade at the desired point. He made a ratchet with two notches, one on each side in the periphery of the ratchet wheel, and constructed a pawl to engage with such notches. The pawl was on the bracket, and the ratchet was on the roller. When the curtain was drawn down the spring in the roller was wound up, and when the curtain was released, while the pawl rested on the perimeter of the ratchet wheel, the curtain would roll up, and continue so to do as long as the velocity of the curtain was sufficient to carry the notches in the ratchet past the pawl before it could fall into them.

Such was the condition of the art when Campbell obtained his original patent dated September 24, 1867. He described his invention as having "for its object to furnish an improved device, by means of which the spring roller of a window shade may be made to hold the shade stationary at any desired elevation, and yet allow the same to be drawn down or run up, without obstruction or stoppage, as far as may be desired, and it consists in the combination of the loose or sliding pins or bolts, having heads formed upon them, with the flattened shaft of the roller, as hereinafter more fully described." The description, as contained in the specifications, is as follows, having reference to the annexed drawings: "A is the window shade. B is the hollow roller, one end of which is pivoted to the bracket C, and the other end of which revolves upon the shaft D, that carries the coiled spring, and the projecting end of which is secured in the jaws of the bracket E, so that, by drawing down the shade A, and thus revolving the roller B, the coiled spring may be wound closer around the shaft D. In the block, or part of the roller B that closes or forms the

Opinion of the court.

shade fixtures in which the shade roller is provided with a spiral spring for automatically winding up the shade. The present invention is an improvement on a shade fixture of this class, for which letters patent were granted to me, bearing date October 11, 1864, and is designed to obviate an objection attending the original device, which consists in the unwinding of the spring whenever the shade roller is removed from its brackets or bearings, a contingency which involves the necessity of winding up the spring previous to the replacing of the roller in its bearings, and which cannot be done by an unskilled person without considerable difficulty." He then proceeds to describe in the specification, by reference to the illustrations, the device which embodies this invention, and adds as follows: "The difference, however, between the within described arrangement and that of the original invention is essential. In the original plan, the spring unwinds immediately as soon as the roller is removed from its bracket or bearings, as the pawl, instead of being attached to the roller or any part connected therewith, is attached to the bracket at the end of the spring nearest the roller, so that the roller may be moved from the bracket without moving the spring, and thus prevented from unwinding. In my present improvement, the pawl is attached to the roller, and both are provided with means for preventing the roller from rotating until the spring is removed from the bracket, and then it will rotate freely, and wind up the spring as it rotates, and thus prevent the spring from unwinding while the roller is in the bracket, and thus prevent the spring from unwinding while the roller is in the bracket, and thus prevent the spring from unwinding while the roller is in the bracket."

The principal object of the present invention was that of providing a shade fixture in which the shade roller is provided with a spiral spring for automatically winding up the shade.

Opinion of the court.

ture in use. It was also inherent in the arrangement of the pawl and ratchet used in this roller—the pawl being stationary and resting on the upper side of the revolving notched hub or ratchet as the roller and its notched hub or ratchet revolved under the stationary pawl—that there would be more or less noise in its operation, caused by the notched hub striking against and throwing up the pawl.

It will, therefore, be perceived that the Hartshorn patent of September 3, 1867, and the Campbell patent of September 24, 1867, are for improvements upon the invention described in the Hartshorn patent of 1864, and in any comparison between the two former the invention embodied in the original Hartshorn patent of 1864 must be eliminated as common to both. The circumstances relied upon to justify and make valid the reissues in 1876 of the Hartshorn patent of 1867, and the Campbell patent of the same year, are conceded to be as follows :

In 1873 a suit was brought in the District of Massachusetts upon the David patent by the Salem Shade Roller Co., then the owner of it, against one William G. Harris, who was selling rollers made by Hartshorn, the present appellant, who assumed the defence of that suit. The rollers sold by Harris had the pawl arranged so as to move towards and away from the axis of the roller, as described and claimed in the David patent, but this pawl was different in form from that shown in the David patent, and engaged with the spindle instead of with the bracket. The transcript of the record in that suit is in evidence in this, and shows that it was made to appear, in the effort to fix the dates of the inventions described in the three patents of David, of Campbell, and of Hartshorn, that Campbell made his invention on the first of May, 1867, while Hartshorn was not able to fix the date of his invention as earlier than about the first of August, 1867. It was thus shown that while Hartshorn had the elder patent he was the junior inventor, and as the claim in the Hartshorn patent of 1867 covered the invention de-

Opinion of the court.

pawl or detent, moving in a chamber or guide, and adapted to engage with the spindle.

"3. The combination of the loose or sliding pins or detents F, constructed as described, with the flattened or notched shaft or spindle substantially as herein shown and described."

It thus appears that the third claim of the reissued Campbell patent of 1876 is identical with the entire claim of the original Campbell patent of 1867, the first and second claims in the reissued patent being entirely new.

In the original Hartshorn patent of September 3, 1867, he characterizes the invention as an improvement upon that contained in his patent of 1864, in this, that the pawl and notched hub, being both connected with the roller, the spring is retained or prevented from unwinding equally as well when the roller is removed from its brackets or bearings as when adjusted in them; and he states his claim as follows: "The attaching of a pawl and a ratchet or notched hub to a window-shade roller provided with a spring, or to parts connected with said roller, in such a manner that the tension of the spring will, without any manipulation or adjustment of parts whatever, always be preserved, whether the roller be fitted in the brackets or bearings or removed therefrom, substantially as set forth." This claim in the reissued patent of October 31, 1876, is changed so as to read as follows: "In a spring shade roller having a pawl or detent and ratchet, or their equivalent, constructed and arranged so as to engage automatically for holding the shade at any desired point or height, the combination with a ratchet, or its equivalent, upon the stationary spindle or stationary part of the fixture, of a hinged or pivoted pawl placed upon the end of the roller and acting substantially at right angles to the ratchet or notched hub.

In the case of *Hartshorn v. Eagle Shade Roller Co. et al.*, 18 Fed. Rep. 90, decided in the Circuit Court of the United States for the District of Massachusetts, the validity of the

Opinion of the court.

ent of 1867, it was inferred and held by the learned Circuit Court of the Massachusetts District that there was no laches in the delay, and no evidence of an abandonment to the public of the invention. In the opinion of that court it is said (18 Fed. Rep. 92): "Campbell, misunderstanding perhaps his rights, or the true state of things, acquiesced through his solicitors, who were common to both parties, in the broad claim of Hartshorn. When the mistake was discovered, it was corrected by a simple exchange of claims. We are of opinion that, under these unusual circumstances, the lateness of the application is explained and shown to have been brought about by an actual mistake without fraud, and to have been one from which no innocent person could have suffered."

We are not satisfied, however, with either this reasoning or the conclusion. Campbell's acquiescence in Hartshorn's claim must be regarded, so far as he is concerned, as an abandonment of any right on his part to a patent for the same invention, and having deliberately rested in that acquiescence for a period of between nine and ten years, it is too late, according to the settled course of decisions in this court, to resume his rights. It is, accordingly, no answer to this view to say that, in the meantime, the invention was not dedicated to the public by Campbell's abandonment, because it was covered by Hartshorn's claim; for, according to the supposition, Hartshorn's was a false claim, and though it may not be regarded as fraudulent, but founded upon an honest mistake, nevertheless the validity of his patent must have failed whenever called in question and the facts were made known, as they did become known, in the suit against Harris. The mutual mistakes of the two parties cannot be considered as correcting each other. Hartshorn claimed an invention to which he now confesses he was not entitled, and for that reason his original patent was invalid. Campbell contented himself with the narrow claim originally contained in his patent of 1867, and thereby ac-

Opinion of the court.

knowledgeed that he was not entitled to the broader claim which he now asserts under his reissue. He had the means and the opportunity at the time the application for his original patent was pending to have asserted his claim to priority of invention; he chose not to do so. He acquiesced in the claim of his adversary; he cannot now claim what he then abandoned.

The question of laches is perhaps immaterial, for the reissue of the Campbell patent was not for the same invention described and claimed in the original. This does not rest merely on the enlargement and change in the nature of the claim. The specification itself was substantially altered. The alterations, it is said in argument, had the effect only of giving a more full, complete, and accurate description of the same mechanism; but, in point of fact, the alterations changed the shape of the specification in such a way as to admit the new and enlarged claim in a manner in which it could not have been made upon the original description. A comparison between the original and reissued patents shows that the specification of the latter has been materially changed so as to cover, as the invention of the patentee, that function of the structure by which the spring will be locked when the roller as a whole is removed from the brackets, in respect to which the original patent is entirely silent. We are, therefore, of the opinion that the first claim of the Campbell reissue, the only one alleged to be infringed in this case, is void.

We are also of opinion that the Hartshorn reissued patent, No. 7,370, of October 31, 1876, is void on a different ground. That reissue disclaims what was claimed in the original patent, viz.: the arrangement of both the pawl and the ratchet upon or in connection with the roller, so that the roller can be removed from its brackets without permitting the spring to unwind, for the reason that such an arrangement had been previously invented by Campbell; and, instead of that claim, the reissued patent is confined

Opinion of the court.

would do away with the noise." He gave a new form to the pawl and ratchet used, and also shifted the ratchet from the roller and made it a part of the bracket, which was a stationary part of the fixture, and applied the pawl or engaging part to the revolving roller. His pawl was "an arm or detent," hinged or pivoted in a radial slot in, and arranged in the plane of the axis of, the roller; the free end of the arm projecting beyond the end of the roller, so that, as the latter revolved rapidly, the free end of the pawl or arm would be carried away from the axis of the roller by the motion of the roller itself. By this movement, when the roller was rapidly turned, sending the detent outward, it would pass over the elevated side of the journal box, which constituted the ratchet. When the roller moved slowly or was in a state of rest, the action of gravity brought the detent toward the center of the roller when the detent was above the center, and at such time the detent engaged the elevated side of the journal box or ratchet, and the revolution of the roller was arrested. His roller was also made of wood bored out at one end to receive the spring, and he placed at one and the same end of the roller the spring which caused the shade to rise, the stationary spindle to which one end of the spring was attached, and the arm or pawl, whereby he was able to saw off the other end of the roller to fit any width of window. As the pawl was on the revolving roller and the ratchet on the bracket, when the roller was removed from its brackets the pawl and the ratchet became disconnected, so that the spring would uncoil instead of holding the parts in place. The claims of the David patent are as follows:

"1. The arm or detent *k*, arranged upon the roller in such a manner that it moves toward and away from the center or axis of the roller *a* by the action of gravity and centrifugal force, substantially as described.

"2. The combination and arrangement, at the same end of a shade roller, of a spring, *e*, rod *d*, and arm or detent *k*, or their mechanical equivalents, substantially as described."

The device is illustrated by drawings accompanying the specification of the patent, as follows :

It is to be observed that in these claims nothing is said about the combination of the arm or detent *k* with the elevated side of the journal box, which is a distinct and separate part of the mechanism ; and yet it is perfectly obvious that it is only in combination with that separate ratchet that the arm or detent *k* performs any useful function at all. The fact that the arm or detent *k*, arranged on the roller in the manner described, moves toward and away from the center or axis of the roller in consequence of the motion of the roller itself, is not patentable independently of any useful combination in which it performs a necessary part. Any arm or detent, pivoted at one end and loose at the other, would necessarily follow the motion of the roller, the loose end flying outwardly. The same remarks apply to the second claim of the combination and arrangement of the roller and spring, the rod, and the arm or detent at the same end of the roller. They perform no function by reason of the circumstance of their being at the same end of the roller, except in conjunction with the ratchet on the bracket, and there is no novelty in such a combination and arrangement, as the same thing was found in the original Harts-horn patent. It follows, therefore, that in the construction of the David patent the claims must be confined, by reference to the specification, to the use of the devices named, in a shade roller, where the pawl or detent is upon the roller, moving with it, and the ratchet or engaging part is separated by being placed upon a journal box or bracket, or other fixed part of the mechanism, and that it must also be limited to the particular form of the arm or detent described. It follows from this that the shade roller manufactured and used by the defendants is not an infringement of the David patent. In the defendants' roller, the pawl and the ratchet are both upon one end of the roller, the pawl being upon the revolving part and the ratchet upon

Syllabus.

GEORGE S. GRIER, APPELLANT, v. JOHN F. WILT.*

120 U. S. 412-430. Oct. Term. 1886.

[Bk. 30, L. ed. 712; 38 O. G. 1365.]

Reversing *Wilt v. Grier*, 5 Fed. Rep. 450.

Submitted January 24, 1887. Decided March 7, 1887.

Particular patent not infringed. Mechanical combination is not a process. Construction of claims. State of the art. Evidence.

1. Claim 4 of letters patent, No. 190,368, A. Q. Reynolds, May 1, 1877, Fruit Drier, for "In combination with a fruit drier, the outer wall of which is made of the frames of the several trays, as explained, a suspending device, operating substantially as described, and supporting said drier from a point in or on the lowermost tray thereof, for the objects named" construed to be for a mechanism and not a process, limited in view of the state of the art to the mechanism described and shown and held, not infringed by the machine described in letters patent, No. 221,056, granted October 28, 1879, to George S. Grier, Fruit Drier, without a "suspending device" and in which each tray can be lifted independently of the others, so that the weight of the series of trays need not rest entirely on the lowermost one. (p. 582.)
2. A claim for a combination of mechanical elements cannot be construed to cover a process or mode of operation, but must be limited to the mechanical features claimed and their equivalents. (p. 582.)
3. Claims must be construed with reference to the prior state of the art. (p. 583.)
4. Prior patents not set up in the answer may be introduced in evidence to show the state of the art and aid in the construction of the plaintiff's claim, though not to invalidate that claim on the ground of want of novelty when properly construed. Doctrine in *Vance v. Campbell*, 1 Black 427, 430 [7 Am. & Eng. 117,] and similar cases, affirmed. (p. 583.)

*See Explanation of Notes, page III.

Argument of counsel.

[Citations in the opinion of the court:]

Vance v. Campbell, 1 Black, 427 [7 Am. & Eng. 117.] p. 583.

Railroad Co. v. DuBois, 12 Wall. 47 [8 Am. & Eng. 443.] p. 583.

Brown v. Piper, 91 U. S. 37 [10 Am. & Eng. 272.] p. 583.

Eachus v. Broomall, 115 U. S. 429 [p. 176 ante.] p. 583.

Appeal from the Circuit Court of the United States for the District of Delaware. Reported below, 5 Fed. Rep. 450.

The history and facts of the case appear in the opinion of the court.

Mr. F. O. McCleary, for appellant:

Claims must be construed in view of the state of the art at the date of the invention.

Washing Machine Co. v. Tool Co., 20 Wall. 342 [9 Am. & Eng. 305;] Pitts v. Wemple, 1 Biss. 87.

A patentee's invention cannot be given a broad construction so as to cover later inventions, when it appears from the state of the art that there was no opportunity for a great original discovery; and the claim is properly limited to the specific improvement.

Root v. Lamb, 7 Fed. Rep. 222. See also Jones v. Barker, 11 Fed. Rep. 597; Washburn & Moen Mnfg. Co. v. Haish, 10 Biss. 65.

An equivalent is such an element or ingredient as will perform the same function as one described in the patent, and which was well known at the date of the patent as a proper substitute for the one described in the patent.

Storrs v. Howe, 4 Cliff. 388; Smith v. Downing, 1 Fish. Pat. Cas. 64; Welling v. Rubber Harness Trimming Co., 7 O. G. 606; Webster v. New Brunswick Carpet Co., 5 O. G. 522; Gill v. Wells, 22 Wall. 1 [9 Am. & Eng. 471;] Fuller v. Yentzer, 94 U. S. 299 [11 Am. & Eng. 176;] Stimpson v. Baltimore & S. R. R. Co., 10 How. 329 [5 Am. & Eng. 129;] Schmidt v. Freese, 12 Fed. Rep. 563.

The so-called "doctrine of equivalents" is based upon the equitable theory that a patentee should be guarded against mere colorable evasions of his claims and trifling

Argument of counsel.

mechanical variations in the details of his devices. It was never intended as a bar to the progress of invention; and the patentee of an improvement on a prior invention cannot invoke the doctrine of equivalents to suppress other inventions which are not mere colorable evasions of the first.

Burden v. Corning, 2 Fish. Pat. Cas. 477; *Seymour v. Osborne*, 3 Fish. Pat. Cas. 555.

Where a patentee is not a pioneer in his line, but simply an improver, he cannot broadly invoke the doctrine of

Opinion of the court.

The appellant's apparatus may be an improvement upon that of the patent by reason of his peculiar form of lifting device affording a more convenient means of breaking the stack, and inspecting or shifting intermediate trays, when desired, but it is none the less an infringement for that reason.

It is too elementary a principle of law to require argument here that the grant of a patent does not confer upon the patentee any right to use inventions previously patented by others which may be included in, or form elements of, the apparatus he has patented.

Mr. Justice BLATCHFORD delivered the opinion of the court:

This is a suit in equity brought in the Circuit Court of the United States for the District of Delaware, by John F. Wilt against George S. Grier, for the infringement of letters patent, No. 190,368, granted to Asa Quincy Reynolds, May 1, 1877, for an "improvement in automatic fruit driers." The specification, drawings and claims, of the patent are as follows:

"Figure 1 is a partial section and elevation of my improved fruit drier, showing the same as being located over an ordinary stove, and illustrating a simple means of elevating the machine. Fig. 2 is a similar view, showing the drier as located over a large furnace, as in the most extensive dry houses. Fig. 3 is a perspective view, illustrating the improved drier in a position removed from over an ordinary cooking stove. Fig. 4 is a perspective view of a fragment of a square tray or section, showing more plainly the metallic lining and the sockets and pins, which may be conveniently used in this form of tray. Fig. 5 is a similar view of a fragment of a round tray or section, showing also the tin or metallic lining. Like letters of reference in all the figures indicate corresponding parts.

The object of my invention is to simplify the construction

Opinion of the court.

of the fruit driers in common use, both for domestic and factory purposes, reducing the cost, increasing the efficiency, and rendering them easier to be manipulated, and at the same time fire proof, and capable of being enlarged or contracted at the pleasure of the operator; to accomplish all of which it (the invention) consists in certain details of construction and combination of parts, as will be hereinafter fully described, and then pointed out in the claims.

In Fig. 1 N is an ordinary stove or heating drum, over which is located the drier, consisting of a number of trays so constructed as that any one will receive a similar one above and also fit over a similar one below. For the lighter forms of driers I propose to make these trays of the ordinary sieves, or build them in the same manner, with perhaps two or more braces beneath the foraminated bottom, to give it sufficient strength to support the weight of fruit.

K is the main body of the tray, having a surrounding hoop, L. The several trays being of one size (save the uppermost, to be hereinafter described,) it will be observed that each one will form a section of the wall of the drier, no matter what its position, and that this wall may be increased in height as much as desired or found necessary.

A is a crane and B a rope or chain running over it and controlled by the windlass O. From the cross bars C the ropes or chains G depend, and these are made to suspend the drier, through the medium of the handles H H, etc., upon each tray. In order to prevent the drier from tipping when elevated, three or more handles should be employed in connection with a corresponding number of chains or ropes, G.

At M is shown an iron ring, supported slightly above the top of the stove N, and upon which the lower tray rests. The drier is built up as follows: Fruit having been suitably disposed in a tray, the hooks upon the lower ends of the ropes G are placed under two or more of the handles H H, on the lowermost tray of the drier already over the

A. Q. REYNOLDS.

AUTOMATIC FRUIT DRIERS.

No. 190,368.

Patented May 1, 1877.

Fig. 1.

Witness:
A. H. Searle
A. H. Low

A. Q. Reynolds,
Inventor.
By *Worth Ogden,*
Attorney.

Opinion of the court.

stove, and the whole is elevated, by means of the windlass O, a trifle more than the depth of one tray. The fresh tray is then placed upon the ring M, and those above lowered upon it, being so guided by the hands that the hoop of the one to which the ropes are attached will fit over the top of the one placed thereunder. In this way the drier may be built as high as desired by the successive introduction of trays below. The swinging crane and windlass combined is regarded as the simplest means likely to be employed for elevating the drier.

As the drying progresses and the trays are elevated, the fruit therein becomes more and more compact or shriveled up, leaving a comparatively free passage for the heated air through the body of the drier, in consequence of which very much of said air would pass off without accomplishing the work intended; and, the partially cured fruit occupying considerably less space than the fresh, it is desirable that one or more smaller sized trays be provided for its reception. Upon the top of the uppermost of the main series of trays I place a flange, F, having a circular opening, with upwardly projecting collar, over which flange is located the tray E, made in all respects similar to those below save as to its size. This flange serves to contract the flue formed by the series of trays below, and if the partially dried fruit be placed in the tray E, it will partially retard the flow of the air, and thus utilize so much thereof as would otherwise be wasted in the completion of the drying process. Above the flange F any number of small trays, E, may be placed; being matched one upon the other in a manner similar to those below.

Within each tray I propose to place a metallic lining, *t t* (preferably of bright tin,) the object of which is to protect the wood of the trays from heat and prevent moisture from penetrating the same.

In Fig. 2 the series of trays forming the dry house is shown as located over a large furnace placed below the



Opinion of the court.

to do away with all these objections. This I accomplish by the introduction of a fan wheel calculated to retard the ascending currents of heated air, and to distribute them uniformly across the whole area of the fruit-containing tray. In Fig. 1, the wheel W, composed of a series of inclined blades, is pivoted between the two bars *g g*, which are attached to the metallic lining *t*, before alluded to. It is sufficiently elevated above the foraminated bottom I as not to interfere with the placing of fruit upon said bottom, if desired. The inclined blades cause the wheel to be rapidly revolved by the ascending currents of air, and these, meeting with a resistance, are compelled to pass by the blades in a uniform manner, said blades being so cut or separated as that they shall permit the passage of an equal quantity of air at every point below the bottom of the tray placed next above. Any number of these fans may be placed in the series of trays, as is apparent from the construction above described. They are automatically operated, not liable to get out of repair, and they are found to be very efficient for the purposes intended. If the currents of air be very rapid and strong the revolutions of the wheels are correspondingly rapid, and thus, under all circumstances, the currents are automatically regulated and always evenly distributed. For the larger sized driers the wheel W may advantageously be placed immediately over the funnel mouth S, conducting the heated air from the furnace below, as in Fig. 2. It may be pivoted in any desirable way, and other fans may be distributed throughout the series of trays. When the trays are made in square form one fan, occupying as much space therein as possible, will be found to work satisfactorily. If the trays be made oblong, then two fans might be introduced, the better to occupy the necessary space. They should, of course, be made to work upon the same level. These wheels have now come to be denominated 'flutter wheels,' and I desire to be understood as not limiting my invention to any particular number to be

Opinion of the court.

employed, to any specified location of said wheels in the drier, or to any particular method of suspending the same, so long as they are made to revolve independently of the trays, and to accomplish the results intended.

Having thus fully described my invention, what I claim as new and desire to secure by letters patent is—

1. In combination with a series of fruit-drying trays, located one above the other, a second or supplementary series smaller than the first and adapted to operate as and for the purposes explained.

2. The plate F, adapted to cover the flue formed by the lower series of trays, and to receive and hold the upper series, the whole being arranged and combined substantially as set forth.

3. In combination with a fruit-drying tray, a fan wheel operated by the ascending currents of heated air, movable independently of said tray, and adapted to equalize the currents of air, in the manner set forth.

4. In combination with a fruit drier, the outer wall of which is made up of the frames of the several trays, as explained, a suspending device, operating substantially as described, and supporting said drier from a point in or on the lowermost tray thereof, for the objects named.

5. In combination with a fruit drier adapted to be elevated, in the manner described, and suspended above a stove or furnace, a suspending device, substantially as shown, provided with a swivel connection, as and for the purposes set forth."

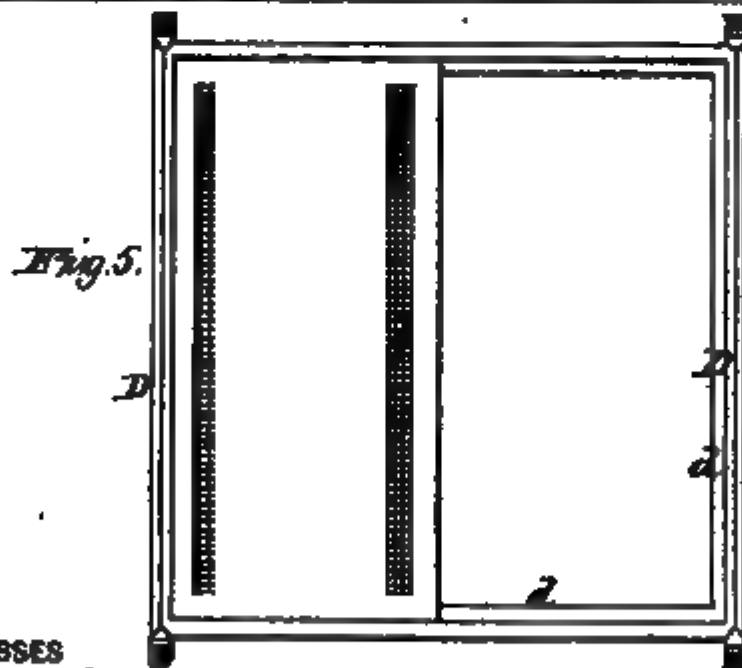
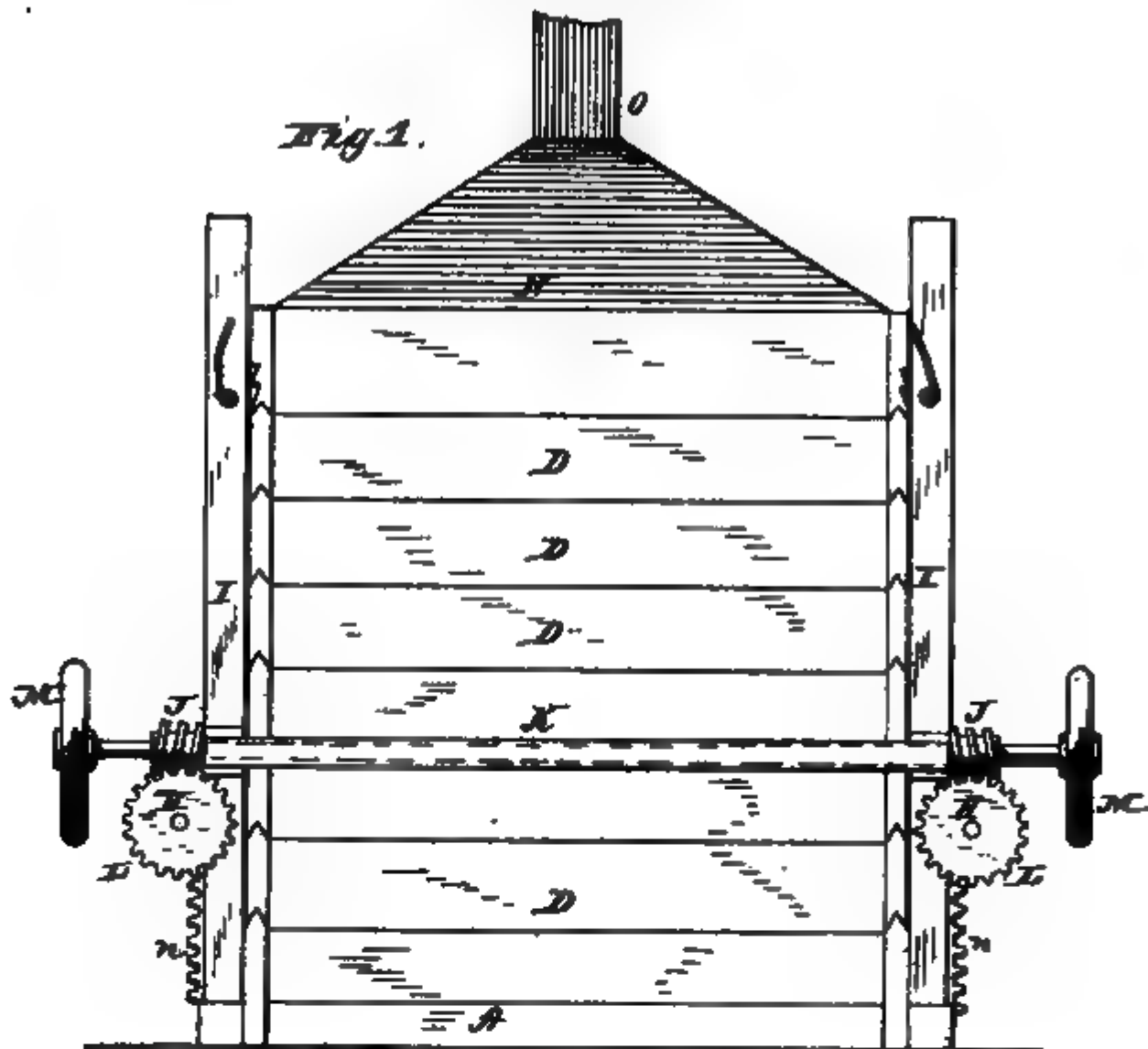
Infringement of the fourth claim only is alleged, the defendant's apparatus being that described in letters patent, No. 221,056, granted to him October 28, 1879, for an "improvement in fruit driers." The description and drawings of that apparatus, in the specification of that patent, are as follows:

"The nature of my invention consists in the construction and arrangement of a fruit evaporator, as will be hereinafter

G. S. GRIER.
Fruit-Drier.

No. 221,056

Patented Oct. 28, 1879.



WITNESSES
F. L. O'Connell
J. J. M. Carthy

INVENTOR
George S. Grier
Alexander Mason
ATTORNEYS

G. S. GRIER.

Fruit-Drier.

No. 221,056.

Patented Oct 28, 1879.

24



WITNESSES

W. L. O'Connell
J. J. McCarty

INVENTOR

George S. Grier
Alexander Watson
ATTORNEYS



Opinion of the court.

more fully set forth. In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which Figure 1 is a side elevation of my improved fruit evaporator. Fig. 2 is a sectional view of the same. Fig. 3 shows the bottom of the drier. Fig. 4 is a vertical section of the roof. Fig. 5 shows one of the boxes with removable trays.

A represents a bed frame, of suitable dimensions, provided with four upright posts, B B, between which the boxes are placed for forming the walls of the evaporator and holding the trays. In the bottom frame, A, are two straight bars, C C, crossing each other at right angles, in the center, and dividing the bottom of the evaporator into four equal divisions. In each division is arranged a series of inclined slats, *a a*, and the four series of said slats are inclined outward in the four different directions, whereby, when the evaporator is set over the furnace, the current of hot air, as it ascends, is directed to the sides of the machine. D D represent the boxes which go to form the walls of the evaporator, and which are open at the top and bottom. Each box contains one or more removable trays, *b*, which rest upon cleats *d* on the inside of the box. The upper edges of the side bars of each box D are made V-shaped, while in their under edges are made corresponding grooves, so that the boxes will fit close together and can easily be moved back and forth. The outer sides of these side bars of the boxes have two or more horizontal notches, *x x*, at each end, into which take pivoted pawls *h h*. These pawls are pivoted to vertically movable posts or uprights I I, which are connected to the stationary corner posts B B by means of rods or bars, *m*, attached to each post I, and passing vertically through eyes *i* in a groove on the stationary post B. Each movable upright I is provided with a rack bar, *n*, and the two rack bars on the same side of the evaporator are operated by pinions, *p*, on a horizontal shaft, H. The two

Opinion of the court.

shafts H H, on opposite sides of the evaporator, are operated by worms J J on a shaft, K, at one end of the evaporator, said worms taking into gear wheels L L on the ends of the shafts H H. The shaft K is provided with hand wheels M M for turning the same.

In operation, the first box, having its tray or trays filled with fruit, is pushed in over the heater or furnace, and after being there, say about ten minutes, more or less, as desired, it is raised up by the gearing and the pawls *h*, attached to the movable uprights I, and another or second box similarly filled with fruit pushed in under the first, and the first lowered down on the second, and so on until twenty or more boxes with trays have been arranged to form the evaporator. It will be noticed that with my mechanism I lift each box independently of the others, so that I can lift a portion above, leaving the boxes of the lower part stationary, by disengaging the pawls below. This enables the operator to examine any one or more of the boxes by sliding them out while those above are suspended.

N represents the cover with central stack O. This cover is put on the first box to cause a draft, and it is raised by resting on the top or first box, so that the evaporator is complete at all times, whether one or twenty, or more boxes are inserted.

In the cover N is a bottom, P, which does not extend to the outer edges of the cover, thereby causing the vapor and heated air to be drawn from the middle to the sides to dry evenly; and it also aids in carrying off the fumes of the sulphur, when such is used to bleach the fruit.

I am aware that a fruit evaporator has been made with upright sliding bars or posts provided with spring pawls, which pass under the trays to support the same, but in such case the pawls are inaccessible, and none of them can be thrown out of the way; whereas in my case the operator can easily disengage any one or more pawls on each post, so as to lift any one or more boxes, or all the boxes together, as may be desired."

Opinion of the court.

successively, by any mechanism whatever, adapted to accomplish that purpose, and which is a mechanical equivalent to the means employed by the complainant is an infringement of his patent. * * *

“The two machines, as will be manifest upon reference to the specifications and drawings in the respective patents, are alike in principle, having a stack in each case composed of sections of trays, fitting upon and into each other, the outer wall of which makes up and forms the exterior of said stack or drying house ; and they are also alike in their purpose and capacity of being moved upward from a point in or on the lowermost tray, and of being suspended in that position, so as to admit the insertion of fresh trays in succession. They are unlike in their respective appliances and devices by which these objects are accomplished, and also in the facility by which intermediate trays between the top and bottom can be removed. The devices by which the trays in the complainant's patent are elevated in the manner described, for the purposes mentioned, are the cord and pulley passing over an upright crane, regulated by a windlass, or wheel and axle, with its ratchet and pawls, * * * the point of suspension * * * being directly over the center of the stack ; and from the ends of the cross bars to which the rope passing through the pulley is attached, depend ropes or chains, which are attached by hooks to handles upon the lowermost tray to be removed, thus contributing both a lifting and suspending device. * * * The machine embodying the defendant's invention * * * exhibits the following means for effecting the elevation of the stack of trays, and their suspension, for the purpose of allowing new trays to be inserted at the bottom ; to wit, four movable uprights, each having a series of pivoted pawls, and arranged to slide in four stationary posts, secured in a frame, in combination with a series of boxes, or trays, having notches in their sides, whereby the boxes may be lifted independently of each other, or all together. The power is

Opinion of the court.

applied through the medium of two worms, situated at each end of a drum, or shaft, extending along the side of, and at least the width of the stack to be lifted. These worms engage into appropriate cog wheels, affixed to two other drums, or shafts, running at right angles to the first named shaft, on opposite sides of the stack, and extend horizontally the length of the same. Upon each of these last mentioned shafts are geared, at the ends of the same, small cog wheels, which, in turn, gear into vertical rack bars on the four sliding posts of the machine. The power is applied by means of a crank at the end of the first-named drum or shaft.

“Now, here is undoubtedly a contrivance and device by which the novel and useful invention, first patented in the Reynolds patent, * * * of elevating the stack of trays from a point in or on the lowermost tray thereof, so as to permit the insertion of a fresh tray at the bottom, is accomplished. It matters not whether this device has the capacity of lifting the upper trays in the series, so as to open the same for inspection or for any other purposes. So long as it accomplishes the purpose, or possesses the capacity, of moving up the whole series of trays from a point on the lowermost tray of the same, so as to permit the introduction of a fresh tray, it is, in that respect, an infringement of the complainant's patent; nor is this conclusion altered because of any supposed advantages gained by the greater facility afforded by the Grier patent in opening the stack at any point above the lowermost tray, for purposes of inspection, or otherwise. * * * The court, upon the best consideration it can give to this subject, has come to the conclusion that the defendant in this cause has used, in the elevation and suspension of the stack of trays in this drier, mechanical appliances and contrivances which, while they differ somewhat in form from those used by the complainant, are mechanical substitutes and equivalents for the same; and in the use of the same for the accomplishment

Opinion of the court.

of the same results as those produced by the complainant's invention, the defendant has infringed upon the exclusive rights secured to the complainant."

The specification of the plaintiff's patent states that the invention "consists in certain details of construction and combinations of parts." The existence in a fruit drier of movable trays, the outer walls of which constitute the drying house, being old, the subject of the fourth claim is the arrangement, in a fruit drier with such trays, of a suspending device connected with the drier in or on the lowermost tray, so as to raise that tray, with all the trays above it, and allow the insertion, underneath all, of a fresh tray, and then lower the trays above it, and couple the suspending device again to the lowermost tray and so on. This is the effect or result of the mode of operation of the devices. The claim, however, is not for a process, but is only for mechanism. The decision of the Circuit Court seems to be based on the view, that the claim covers all methods of raising the lowermost tray with those above it, if opportunity is given to insert a fresh tray underneath; and that, while the appliances and devices of the plaintiff and defendant are unlike each other, the defendant infringes because he attains the same result, of inserting a fresh tray underneath, while the trays before inserted are moved up and held up by a force imparted to the lowermost one of them. The decision describes the invention as consisting in "elevating the stack of trays from a point in or on the lowermost tray thereof, so as to permit the insertion of a fresh tray at the bottom;" and it, in effect, regards all mechanism for causing such elevation in such manner as a mechanical equivalent for the patented mechanism, because the result is to allow a fresh tray to be inserted underneath. And this is the view urged here by the appellee.

The defendant introduced in evidence three United States patents—one to Adam Snyder, No. 48,733, July 11, 1865, for a "fruit drier;" one to Joseph B. Okey and Ferdinand

Opinion of the court.

A. Lehr, No. 108,289, October 11, 1870, for an "improvement in fruit driers;" and one to Joel Orlando Button, No. 155,286, September 22, 1874, for an "improvement in fruit driers." Their introduction was objected to by the plaintiff, because they were not set up in the answer. But they were receivable in evidence to show the state of the art, and to aid in the construction of the plaintiff's claim, though not to invalidate that claim on the ground of want of novelty, when properly construed. *Vance v. Campbell*, 1 Black, 427 [7 Am. & Eng. 117;] *Railroad Co. v. Dubois*, 12 Wall. 47 [8 Am. & Eng. 443;] *Brown v. Piper*, 91 U. S. 37 [10 Am. & Eng. 272;] *Eachus v. Broomall*, 115 U. S. 429, 434 [p. 176 *ante*.]

The Snyder patent and the Okey and Lehr patent show, each of them, in a fruit drier, a series of trays, arranged one above another so that the frames of the trays form the wall of the drier. The Button patent shows a fruit drier, within which is a movable frame, which carries racks that rest upon each other. The racks are inserted through a door immediately above the frame, one by one, and each one is separately elevated on the frame by cam levers till it is held by spring catches, which move back while a rack is being elevated, and as soon as it passes spring out and support it, while the frame is being lowered for another rack. Each rack goes up with the frame, and, having been inserted at the extreme bottom, it carries up the racks above it, when it reaches them, and so on until they can be successively taken out at the top. The frames of the trays, which thus rest on each other, constitute, in a measure and to a degree, the walls of a chamber in which the drying takes place.

Movable trays, the outer walls of which constituted the drying chambers, being old, and apparatus having existed before to raise a tray or rack, and a column of racks above it and insert a fresh one at the bottom, and the two having been used in connection, the fourth claim of the plaintiff's patent must be limited to the mechanism described and

Notes and citations.

shown. The circuit court made no reference to the Button patent.

The plaintiff's patent describes and claims "a suspending device, operating substantially as described." The defendant has no such suspending device. The plaintiff has a crane, with suspended ropes, and his lowermost tray, while being raised, necessarily carries on it the weight of all the trays and fruit above it. In the defendant's apparatus each tray can be lifted independently of the others, and each tray is supported independently, so that the weight of the series of trays, and of the fruit on them, need not rest entirely on the lowermost tray. This result being different from that in the plaintiff's device, the mechanism is different and is not an equivalent of that of the plaintiff, any more than the plaintiff's is the equivalent of Button's. The fourth claim of the patent, if valid, cannot be construed so as to cover the defendant's apparatus.

The decree of the Circuit Court is reversed, and the case is remanded to that Court, with a direction to dismiss the bill of complaint, with costs.

120 U. S. 429-430.

Notes:

2. Mechanical combination claims cannot be construed to be for a process:

LeRoy v. Tatham, 14 How. 156 [5 Am. & Eng. 313.]

Corning v. Burden, 15 How. 252 [6 Am. & Eng. 69.]

Railroad Co. v. Dubois, 12 Wall. 47 [8 Am. & Eng. 433.]

Dryfoos v. Wiese, 124 U. S. 32.

Crescent Brewing Co. v. Gottfried, 128 U. S. 158.

Patent in suit:

No. 190,368. Reynolds, A. Q. May 1, 1877. Fruit Drier.

INDEX DIGEST

OF

DECISIONS OF THE SUPREME COURT OF THE UNITED STATES IN PATENT CASES REPORTED IN THIS VOLUME.

PAGE.

Abandoned Experiment.

1. Where an alleged prior process continued to be used for many years, though somewhat imperfectly applied, *held*, that it could not be regarded as an abandoned experiment. *Miller v. Foree* 193

Abandonment.

1. An invention may be abandoned as well after rejection or withdrawal of application, as before filing it. Such abandonment may be proved either by express declarations or by conduct inconsistent with any other conclusion. *Planing-Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404] reaffirmed. *Rifle and Cartridge Co. v. Whitney Arms Co.* 337
2. An inventor whose application has been rejected, and who without substantial reason or excuse, takes no steps for years to reinstate or renew it, must be held to have acquiesced in the rejection, and to have abandoned any intention of further prosecution. *Planing-Machine Co. v. Keith*, 101 U. S. 479 [12 Am. & Eng. 404] reaffirmed. *Rifle and Cartridge Co. v. Whitney Arms Co.* 337

See Commissioner's Decisions, 1 ; Particular Patents, 9, 23, 32, 38.

Account of Damages.

See Profits, 1.

Acquiescence.

See Abandonment, 2 ; Particular Patents, 32.

Aggregation.

See Particular Patents, 18, 39.

Amendments to Application.

1. When an applicant for a patent to cover a new combination is compelled by the rejection of his application by the Patent Office to narrow his claim by the introduction of a new element, he cannot, after the issue of the patent, broaden his claim by dropping the element which he was compelled to include in order to secure his patent. *Shepard v. Carrigan* 235
2. A patentee having, in compliance with the requirements of the Patent Office, excluded by amendment certain matter from his original specification, is not at liberty to insist upon a construction of his patent which will include what he was expressly required to abandon and disavow in it. *Sutter v. Robinson* 481

Analogous Use.

See Particular Patents, 29, 35.

Application.*Amendments.*

See Amendments to Application.

Withdrawal of Application.

See Abandonment, 1.

Article of Manufacture.

See Particular Patents, 42.

Assignments.

See Employer and Employé, 1.

Bill in Equity.*Bill in Equity to obtain Patent.*

1. A bill in equity implies a suit in equity with process and parties, and a bill brought under section 4915, Revised Statutes, is no exception to this rule. *Butterworth v. Hill* 51
 2. The Commissioner of Patents, by accepting services of a process issued under a bill brought under section 4915, Revised Statutes, in the District of Vermont, and accompanying such acceptance with a letter declining to appear in defence of the suit, does not consent to the jurisdiction of the court, and, therefore, the court were without authority to proceed and enter the decree which has been appealed from. *Butterworth v. Hill* 51
- See Construction of Statutes, 1.

Change in Degree.

See Particular Patents, 30.

Claim.

1. If an applicant, in order to get his patent, accepts one with a narrower claim than that contained in his original application he is bound by it. *Shepard v. Carrigan* . 235
 2. The scope of letters patent must be limited to the invention covered by the claim, and while the claim may be illustrated it cannot be enlarged by language used in other parts of the specification. *Yale Lock Mfg. Co. v. Greenleaf* 305
 3. The validity of a claim in a patent is not affected where its separate elements have been anticipated, unless the entire combination of such elements has also been anticipated. *Cantrell v. Wallick* 322
 4. While the specification may be resorted to for a better understanding of the claim, it cannot be used for the purpose of changing it. *White v. Dunbar* 397
 5. The claim is a statutory requirement calling for precision on the part of the patentee, and must be construed in accordance with the plain import of its terms. *White v. Dunbar* 397
 6. Claims must be construed with reference to the prior state of the art. *Grier v. Wilt* 558
- See Amendments to Application, 1; Combination, 3; Costs, 1; "Substantially as described," 1.

Combination.

1. A combination is patentable only when the several elements of which it is composed produce by their joint action a new and useful result, or an old result in a cheaper or otherwise more advantageous way. *Stephenson v. Brooklyn Cross-Town R. R. Co.* 63
 2. A new combination of known devices, whereby the effectiveness of a machine is increased, may be the subject of a patent. *Cantrell v. Wallick* 322
 3. A claim for a combination of mechanical elements cannot be construed to cover a process or mode of operation, but must be limited to the mechanical features claimed and their equivalents. *Grier v. Wilt* 558
- See Claim, 3; Particular Patents, 2, 7, 10, 13, 20, 21, 22, 25, 40, 43.

Commissioner's Decision

1. The decision of the Commissioner upon the question of

	PAGE.
abandonment is not conclusive, but may be reviewed in a suit for infringement. <i>Planing-Machine Co. v. Keith</i> , 101 U. S. 479 [12 Am. & Eng. 404] reaffirmed. <i>Rifle & Cartridge Co. v. Whitney Arms Co.</i>	337
See Defences, 1.	

Commissioner of Patents.

1. In his official capacity the Commissioner of Patents is an inhabitant of Washington, in the District of Columbia. *Butterworth v. Hill* 51
- See Bill in Equity, 2.

Construction of Patents.

See Amendments to Application, 1, 2.

Construction of Statutes.

1. Section 739, Revised Statutes, which provides (with certain exceptions) that no civil suit shall be brought before either the circuit or district courts of the United States against an inhabitant of the United States, by any original process, in any other district than that of which he is an inhabitant, or in which he may be found at the time of serving the writ, applies to suits brought under sec. 4915 R. S. relating to a bill in equity to obtain a patent on the refusal of the application either by the Commissioner of Patents or by the Supreme Court of the District of Columbia, on appeal from the Commissioner. *Butterworth v. Hill* 51
 2. The word "new" in section 4886, Revised Statutes, means new to the extent of requiring the exercise of the inventive faculty. *Gardner v. Herz* 368
- Act 1870, see Particular Patents, 9.
 R. S. § 4915, see Bill in Equity, 1, 2.
 R. S. § 4920, see Defences, 1.

Costs.

1. One of the claims of the reissue being invalid, the complainant cannot recover costs in the court below, and in this court each party pays his own costs, and the expense of printing the record is shared equally. *Yale Lock Mfg. Co. v. Sargent* 275

Damages.

1. Where patentee granted no licenses, had no established royalty, but manufactured his own locks in sufficient numbers to supply the demand, a reduction in the price

	PAGE.
of his own locks, forced by the competition of the defendant, is a fair measure of damages. Yale Lock Mfg. Co. v. Sargent	275
2. Established license-fees are the best measure of damages for infringement of patents, and special damages beyond these are more properly the subjects of allowance by the Court under the provisions of the statute. Clark v. Wooster	426

Decree.

Decree pro confesso.

1. The appellee, complainant below, filed his bill alleging infringement of certain letters patent, reissued, for an Improved Folding Guide for Sewing Machines. The defendants appeared by their solicitor, but filed no answer and made no defence, and a rule that the bill be taken *pro confesso* was entered, and a decree duly made to the effect that the letters patent were valid, that defendants had infringed them, and that complainant recover the profit and damages. Under this decree the parties went before the master, whose report found certain damages and profits, and, on exceptions, the court made a decree allowing the profits, but disallowing the damages. On the appeal therefrom, assigning reasons for reversal relating to the account before the master and his report thereon, and relating to the invalidity of the reissue for want of identity with the original and delay in procuring the reissue, the decree was affirmed, that the defendants were concluded by the decree from attempting to show the invalidity of the reissue for the reasons alleged, and because the exceptions to the master's report were overruled. Thomson v. Wooster 28
2. Under the equity rules prescribed by the Supreme Court the defendants are concluded by the decree *pro confesso*, so far at least as it is supported by the allegations of the bill, taking the same to be true. They are barred and precluded from questioning its correctness on appeal, unless on the face of the bill it appears manifest that it was erroneous and improperly granted. Thomson v. Wooster 28
3. The decree having declared the reissued patent to be valid, the attempt to show before the master that it was for a different invention from that described in the original patent, or that it was void for unreasonable delay, was inadmissible. Nor can facts (the original patent)

	PAGE.
not embraced in the allegations of the bill be introduced on appeal for the purpose of countervailing the decree. <i>Thomson v. Wooster</i>	28

Defences.

1. Defences of suits for infringement are not limited to those enumerated in section 4920, Revised Statutes, but embrace all violations of statute in the granting of a patent, such violations raising questions of law, the decision of the Commissioner upon them is not binding upon the courts. *Gardner v. Herz* 368

Delay.*Delay in Filing Disclaimer.*

See Disclaimer, 2.

Delay in Reissuing.

See Particular Patents, 36, 40, 42, 44, 49; Reissue, 1, 3, 4, 5.

Disclaimer.

1. No disclaimer can be filed after the expiration of a patent. *Yale Lock Mfg. Co. v. Sargent* 275
 2. Where the validity of a reissue claim had been sanctioned by the Commissioner of Patents in granting it, and the claim was not held invalid by the Circuit Court, *held*, that there was no unreasonable delay in filing a disclaimer to it. *Yale Lock Mfg. Co. v. Sargent* . . . 275
- See Particular Patents, 38.

Employer and Employee.*Employer and Employé—Inventor.*

1. An employé of a corporation made an invention in the direct line of its business while in its pay, and used material and labor wholly paid for by it, but was under no special contract to invent for it, and there being no circumstances from which it might fairly be inferred that he was required or expected to invent for it, *held*, that he did not thereby give such corporation a right to an assignment of the patent granted for such invention. *Hapgood v. Hewitt* 412
 2. Under such circumstances the corporation had only a naked license to make and sell the patented improvement as a part of its business. *Hapgood v. Hewitt* . . 412
 3. The right was a mere personal one, was not transferable, and was extinguished with the dissolution of the corporation. *Hapgood v. Hewitt* 412
- See Injunction, 1.

Equivalent.

See Particular Patents, 34, 37.

Estoppel.

1. While an improvement upon an earlier patent may support a valid claim, and is not inconsistent with such earlier patent, one who infringes both the earlier patent and the improvement upon it is not permitted to set up the earlier patent as an anticipation of the improvement patent. *Cantrell v. Wallick* 322
- See Amendments to Application, 2 ; Claim, 1, 2 ; Decree, 1, 2, 3 ; Particular Patents, 32, 49.

Evidence.

See Identity, 2 ; Jury, 1 ; Reissue, 7 ; State of the Art, 1.

Expanded Reissue Claims.

See Reissue, 4.

Expired Patent.

See Disclaimer, 1 ; Jurisdiction, 1, 2, 3.

File-Wrapper and Contents.

See Particular Patents, 23.

Identity.

1. A comparison of the original patents, for the purpose of determining the question as to the identity of inventions described in them, requires an interpretation of the original patent in the light of the state of the art at the date when the application for it was filed. *Eachus v. Broomall* 176
2. As matter of law where the differences in construction are obvious upon inspection, and where it is not within judicial knowledge that the differences are immaterial or did not require the exercise of invention, the legal identity of two structures is not manifest.
Where as matter of fact there is evidence that these differences between two structures are material, the case should be submitted to the jury. *Keyes v. Grant* 346

See Particular Patents, 8, 10.

Identity of Original and Reissue.

See Particular Patents, 26, 28, 33, 42, 46 ; Reissue, 7.

Improvement.

See Estoppel, 1 ; Patents, 1.

Inadvertence, Accident or Mistake.

See Particular Patents, 40, 41.

Mistake of Solicitor.

See Particular Patents, 44.

Infringement.

See Particular Patents, 1, 2, 3, 4, 5, 7, 10, 14, 15, 17, 19, 20,
22, 23, 24, 27, 36, 43.

Infringer.

See Estoppel, 1.

Injunction.

1. The bill asked to have the patentee—employé of an extinct corporation—enjoined from bringing any action for infringement at law or in equity against the corporation. As the patentee could only bring a suit at law against the trustees or stockholders of said corporation for infringements by it while it existed, and the theory of the bill discloses a perfect defence to such suit (a personal license from the patentee,) no equity court, certainly no Circuit Court, of the United States, will interfere to enjoin a pending suit at law, much less the bringing of one in the future. *Hapgood v. Hewitt* 412

Invention.

1. Changes in the construction of an old machine which increase its usefulness are patentable. *Cantrell v. Wallick* 322
 2. The statement of the object of the invention in the specification is a different thing from the invention itself. *White v. Dunbar* 397
- See Combination, 1, 2; Particular Patents, 13, 18, 21, 25, 29, 30, 35, 39, 42, 47.

Complete Invention.

3. Where an inventor put his device "onto two, or maybe three drills," and they worked perfectly, *held*, that it was a complete invention. *Brown v. Davis* 212
- See Abandoned Experiment, 1.

Substitution of Equivalent.

See Particular Patents, 34.

Joint Owners.

See Partnership, 1

Jurisdiction.

1. Where a bill in equity for the infringement of a patent and praying for an injunction was filed fifteen days before the expiration of the patent, and in season, by the rules of the proper court, to have obtained a preliminary injunction, the court had jurisdiction of the case, and could retain the bill if in its discretion it saw fit to do so. *Clark v. Wooster* 42
2. If, however, by the course of the court where the suit was brought, no preliminary injunction could be obtained, the bill should be dismissed for want of jurisdiction. *Clark v. Wooster* 42
3. The jurisdiction of the court having attached, although the principal grounds of relief expired with the patent, if the general allegations of the bill covered other grounds of relief, the jurisdiction remained. Even if the bill had no such general allegations, if it was for equitable relief when the suit was commenced, the mere fact that the ground for such relief expired with the patent would not take away the jurisdiction and preclude the court from the incidental relief which belongs to cases of that sort. *Root v. Railway Company*, 105 U. S. 189 [13 Am. & Eng. 556,] is not inconsistent with the views expressed in this case. *Clark v. Wooster* 42
4. Where the bill alleges equitable grounds for relief—as, for instance, fraud—and the allegations are not sustained by the proofs, the bill will be dismissed *in toto*, both as to the principal relief sought as well as to the relief incidental thereto. *Clark v. Wooster* 42
5. Where the court below had jurisdiction at the commencement of the suit, even upon a narrow ground, if the defendant did not ask for a dismissal for want of jurisdiction, this Court will be reluctant, if it had the power, after the case had been tried and determined on the merits, to reverse the decree upon appeal on the ground of lack of jurisdiction in the lower court. *Clark v. Wooster* 42

See Bill in Equity, 2.

Jury.

1. Where there is evidence on both sides of an issue, it ought to be submitted to the jury to weigh and consider if the verdict would not be set aside by the court for want of sufficient evidence. *Keyes v. Grant* 346

See Identity, 2.

License.

See Employer and Employé, 2, 3.

License-Fee.

See Damages, 2.

Mechanical Skill.

See Particular Patents, 1, 2, 3.

New Matter.

See Particular Patents

Notice.

See Prior Use, 1 ; 8

Novelty.

See Claim, 3 ; Particular Patents, 1.

Commercial and Patentable

See Particular Patents

Particular Patents.

1. The claims of letters patent No. 1866, and No. 1867, granted to George Eastman & Co. v. Crosby [15 Am. & Eng. L. & Eq. 251] a huddling-chamber fringed by a rod and no strict necessity for the open air. See . . .

2. The first claim of letters patent of F. S. Davenport, a combination of the rod Q, a prior state of that the friction of plaintiff's the hinged-bent the present the present were substantiated. v. Furst & B.

3. Letters patent, 1 June 25, 1867.

PAGE.

- ure of Blanks for Carriage Thill Shackles," are not infringed by the manufacture of blanks for shackles in accordance with letters patent, No. 106,225, granted to Willis B. Smith, August 9, 1870. *Clark v. Beecher Mfg. Co.* 120
4. The features of the Clark patent are: that, by dies the arms of the blank are bent into an oblique direction and the body into a curved form, so that the parts where the arms join the body are rounded on the outside as well as the inside; and that when subsequently the curved body is straightened there will be in it sufficient metal to form sharp outside corners, by being pushed out into them. *Clark v. Beecher Mfg. Co.* 120
5. The arms of the Smith blank are not bent in an oblique direction, its body is not curved, the parts where the arms join the body are not rounded, either on the inside or on the outside, and, in afterward straightening the blank, surplus metal is not pushed toward or into the corners to form them, but the existing corners, already formed, are forced further apart, by driving surplus metal into the back, between the corners. *Clark v. Beecher Mfg. Co.* 120
6. In view of the state of the art, and the terms of the Clark patent, it must be confined at least to a shape which, for practical use, in subsequent manipulation, has a disposition of metal which causes a sharp corner to be formed in substantially the same way as by the use of his blank. *Clark v. Beecher Mfg. Co.* 120
7. Claim 1 of letters patent, No. 98,622, J. Sargent, January 4, 1870, Permutation Lock, for "The arrangement of two or more rollers, H, H', of varying eccentricity, when combined with the cam in the manner and for the purposes specified," construed and held that a variation of eccentricity is made by the description and claim as essential to the invention, although an equally good or even the same result might be obtained without it, and is not infringed in view of the fact that the defendant does not use the same combination, and employs no device as an equivalent and substitute for the omitted element. *Yale Lock Mfg. Co. v. Sargent* 264
8. Where plaintiffs put in evidence their letters patent, No. 121,385, for Smelting-Furnaces, granted November 28, 1871, to Winfield S. Keyes and Albert Arents, and proof of infringement, and the defendants put in evidence certain old publications and illustrations of smelting-furnaces, and testimony that these were an-

ticipations of the patent furnace, and the plaintiffs in rebuttal put in testimony that the furnace of the old publications differed materially from the patent furnace in construction, mode of operation, and result ; and the court instructed the jury to return a verdict for the defendants, which was done, and to this instruction exception was taken and assigned for error, *held*, that this instruction was erroneous, because the identity of the furnaces in the publication with that of the patent was neither manifest as matter of law, nor established so conclusively as matter of fact, that a verdict for the plaintiffs could not be supported. *Keyes v. Grant*

346

9. Cochran originally filed his application January, 1859, which was rejected in February, 1859, withdrawn in February, 1860, and twenty dollars refunded. Cochran filed a new application for the same invention in 1868, which was rejected by the Commissioner in 1869, upon the ground of abandonment, but upon appeal the decision of the Commissioner was reversed by the Supreme Court of the District of Columbia. On July 7, 1870, the Commissioner again rejected the application, and on December 5, 1870, Cochran renewed his application of 1868 under the Act of July 8, 1870, which resulted in the patent in suit. In the interim between the applications of 1859 and of 1868, Cochran obtained numerous patents, sold some of them to advantage, but remained poor and in debt, and still it was evident that his delay did not arise from poverty, but from a small estimate of the value of the particular invention. *Held*, that under these circumstances the invention had been abandoned before the renewed application of 1868, and letters patent, No. 126,446, granted to John W. Cochran, May 7, 1872, for an Improvement in Breech-loading Firearms, declared invalid. *Rifle & Cartridge Co. v. Whitney Arms Co.* 337
10. Letters patent, No. 140,536, issued July 1, 1873, to F. L. Pope, for an Improvement in Circuits for Electric Railroad Signals, construed to be a patent for a combination in which all the elements were known and open to public use. Its object was the accomplishment of a particular result—namely, to work electric signals on the block system. But the thing patented was the particular means devised by the inventor to accomplish that result, and to constitute in this case identity of invention, and therefore infringement, the result, the

- elements or their equivalents, and the combination must be the same, so that each element shall perform the same function. *Electric Railroad Signal Co. v. Hall Ry. Signal Co.* 1
11. In complainants' patent insulated sections of the rails as circuit-closers constitute an essential element in the combinations, the wheels and axles of the train forming an electrical connection between the opposite insulated rails at appropriate places, and so actuating the signal. The defendants dispense with insulated sections of the track and employ a separate instrument placed near the track from which a lever connects with the track, and is operated by the passing wheels of the train. *Electric Railroad Signal Co. v. Hall Ry. Signal Co.* 1
12. In complainants' patent a single battery is used to operate an electric circuit of considerable length by means of two wires or other metallic conductors attached to the positive and negative poles of the battery and suitably insulated from each other and from the earth. The defendant's plan does not include such a metallic circuit, but uses a circuit composed in part of the earth. In this case the evidence shows the difference is more than a mere substitution of the earth for one of the conducting-wires. It consists in the use of new elements, a new combination, and a new result. On the ground therefore of the two points mentioned the defendants do not infringe. *Electric Railroad Signal Co. v. Hall Ry. Signal Co.* 1
13. Letters patent, No. 142,810, J. A. O'Haire, September 16, 1873, Street-Car, for the combination of a rod, crank, or lever, and guiding-frame secured to the front door of a street-car, and combined with an operating-lever which enables the driver to open the rear door, construed and *held*, that there was no evidence that O'Haire made his invention prior to date of the application, and as the state of the art at that time showed that neither the separate elements of the devices nor the combination were new, that there was no patentable invention in the contrivance described in the patent, and hence no infringement. *Stephenson v. Brooklyn Cross-Town R. R. Co.* 63
14. Letters patent, No. 155,077, granted to J. F. Field, September 15, 1874, for Improvement in Glove-Fastenings, construed not to cover, broadly, the use of springs to close the wrists of gloves, but only his style of spring

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| combined with the wrists of gloves for that purpose, and, <i>held</i> , not infringed by a device consisting of two stiff arms with a spring on one operating on the cam-shaped end of the other to hold them tight when closed a certain distance. <i>Field v. De Comeau</i> | 204 |
| 15. Letters patent, No. 155,534, granted September 29, 1874, to Helen M. Macdonald, for an Improvement in Dress-Protectors, construed and limited in view of disclaimer, contained in file-wrapper and contents, and <i>held</i> , to include a fluted or plaited band or border as one of the essential elements of the invention, and is not infringed by a skirt-protector manufactured under letters patent, No. 161,012, granted March 23, 1875, to Theodore D. Day, having neither plaited nor fluted bands or borders. <i>Shepard v. Carrigan</i> | 235 |
| 16. Letters patent, No. 161,568, J. Stephenson, March 30, 1875, signaling Drivers on Street-Cars for two bell-cords, provided with a system of pull-straps, passing along the sides of a street-car, within convenient reach of the seated passengers for signaling purposes, construed and <i>held</i> , that as the evidence shows that long prior to the application such signaling appliances had been attached to the middle of street-car ceilings, there was no invention in changing them to the sides of the car, and hence the patent was void. <i>Stephenson v. Brooklyn Cross-Town R. R. Co.</i> | 63 |
| 17. Letters patent, No. 163,825, granted to W. Wallick, May 25, 1875, for an Improvement in Apparatus for enameling Moldings, sustained as a valid and patentable improvement consisting of a combination; <i>held</i> , infringed by defendant's machine, which performs substantially the same function in substantially the same way to obtain the same result, and that in the absence of preponderance of proof, prior use is not made out. <i>Cantrell v. Wallick</i> | 322 |
| 18. Letters patent, No. 167,585, J. Stephenson, September 3, 1875, Street-Cars, for a combination for a bonnet in which was fixed a mirror, and an opening in the front door of a street-car, by means of which the driver can see what is transpiring within the car without turning his head, construed and <i>held</i> , that as each element was old, and as neither element performed any new office or imparted any new power to the other, and as all combined did not produce any new result nor any old result more cheaply or otherwise more advantageously, this was a mere aggregation, and not a patentable combination. <i>Stephenson v. Brooklyn Cross-Town R. R. Co.</i> | 63 |

19. Letters patent, No. 169,189, J. David, September 24, 1867, Curtain-Fixture, as construed and limited in view of a prior patent, upon which it is an improvement, has a pawl upon the end of a revolving roller and a ratchet upon a stationary bracket, and is not infringed by a structure where the pawl and ratchet are upon the same end of the roller, and differ from those described in David's patent. Hartshorn v. Saginaw Barrel Co. . . . 53
20. Claim 1 of letters patent, No. 177,334, A. B. Hutchins, May 16, 1876, Hydro-carbon Stove for "The water vessel A, with its perforated top plate A' and hot-air cylinder C, hinged at c to plate A', and top perforated plate L, all arranged and constructed together, substantially, &c.," construed and limited to the use of a perforated top plate to the cylinder having the functions and mode of operation set forth, and held, not infringed by defendants, who do not have such perforated top plate in their combination, or any equivalent for it. Sharp v. Riessner 501
21. Letters patent, No. 187,100, granted to John Clark, February 6, 1877, for "Improvements in Cheese-Formers for Cider-Presses," construed and held, in view of the fact that the rack for the pomace was old, a cloth to envelope the pomace on the rack was old, and, in combination with these parts, an inclosure to confine the pomace with a uniform depth was old, it did not involve invention but only ordinary mechanical skill and judgment to employ a guide-frame smaller than the rack to confine the pomace. Clark Pomace Holder Co. v. Ferguson 441
22. Claim 4 of letters patent, No. 190,368, A. Q. Reynolds, May 1, 1877, Fruit-Drier, for "In combination with a fruit-drier, the outer wall of which is made of the frames of the several trays, as explained, a suspending device, operating substantially as described, and supporting said drier from a point in or on the lowermost tray thereof, for the objects named," construed to be for a mechanism and not a process, limited in view of the state of the art to the mechanism described and shown and held, not infringed by the machine described in letters patent, No. 221,056, granted October 28, 1879, to George S. Grier, Fruit-Drier, without a "suspending device" and in which each tray can be lifted independently of the others, so that the weight of the series of trays need not rest entirely on the lowermost one. Grier v. Wilt 558

23. Letters patent, No. 216,293, granted June 10, 1879, to Abraham Robinson, for Improved Apparatus for steaming Leaf-Tobacco, construed and limited, in view of express abandonment and disavowal in the application, file-wrapper and contents, to the substitution of a wooden vessel for holding tobacco while being re-sweated, in place of a metallic one, and *held*, that if this construction in patentee's apparatus, is equivalent to the cases, boxes, or packages in which tobacco-leaves are originally packed by the producer, it has been anticipated by various persons and is wanting in novelty. If not, it is not infringed by respondents, who use as a tobacco-holder the ordinary tobacco cases in which the leaf comes packed. *Sutter v. Robinson*. 481
24. The claims of reissued letters patent, No. 4,364, granted to Schillinger, May 2, 1871, (original No. 105,599, July 19, 1870,) for Concrete Pavements, *held*, not infringed by a concrete pavement laid in strips in one mass from the curb inwardly, and then marked crosswise into blocks with a blunt marker to the depth of about one-sixteenth of an inch where such marking was for ornamentation, and produced no free joints between the blocks, the free joints being an essential element of the patented invention. *California Artificial Stone Paving Co. v. Schallicke* 469
25. Claim 1 of reissued letters patent, No. 4,488, G. Rosner, July 25, 1871, (original No. 30,092, September 18, 1860.) Permutation Lock, "In a permutation lock, in combination with a set of wheels consisting each of an outer ring or rim and a central disc or hub, a set of fastening devices or bolts, *r, r*, which is made to fasten or unfasten said parts composing the wheels by the insertion of a key through each or all of the wheels, whereby the combination of the lock may be changed, substantially," &c., construed.
- In complainant's lock the key fitted closely in each of the wheels through which it passed, so that they were held in position by the key, while in the anticipating lock the key passed through irregular apertures in the wheels, permitting them some freedom of movement, and, therefore, the key of complainant's lock performed an office not performed by the key in the anticipating lock. *Held*, first, that the difference between the two structures did not avoid anticipating the patent, because the shape and size of the keyholes were not mentioned in the claim of complainant's patent as one of

the elements of his combination, although information in this respect was given in the specification.

Held, secondly, it required no invention but only mechanical skill to make the anticipating lock correspond precisely in the fitting of the key in the wheels with complainant's lock, and therefore the anticipation of complainant's claim was complete. Yale Lock Mfg. Co. v. Greenleaf 303

26. Claim 1 of letters patent, No. 57,574, J. Sargent, August 28, 1866, Lock, was for "The rotating tumbler, I, when separated and isolated in action from the permutation wheels, and so arranged that any inward pressure upon the bolt will be exerted on the bearing of said tumbler, and have no action or effect upon the said permutation wheels, 'substantially,' " &c.; *held*, that claim 1 of its reissue, No. 4,696, January 2, 1872, for "In a combination lock in safe or vault doors, a bolt, I, which turns on a pivot or bearing, when said bolt, I, is used in a lock having no ordinary sliding lock bolt, and in connection with the separate bolt work of the door, and so arranged as to receive the pressure of the said bolt without transmitting it to the wheels or other equivalent works of the lock," was for the same invention, a substantial reproduction of the original claim, and not an unlawful expansion, and therefore not affected by the delay in reissuing. The 4th claim invalid for unlawful expansion after 5 years delay. Yale Lock Mfg. Co. v. Sargent 275

27. The reissue claim *held*, novel and infringed by a lock which had the pivoted bolt of the first claim of the patent, and although the bolt of the infringing lock served as a stop to two sets of bolt-works instead of one, as in the patent, and was pivoted differently and connected differently from that in the patent, yet, that such changes in construction and arrangement came fairly within the terms of said claim, and the operation of the two locks were the same in respect to the combination of said claim. Yale Lock Mfg. Co. v. Sargent 275

28. Where the original patent, No. 142,154, J. Eachus, August 26, 1873, Machine for cutting Paper Boards, was for a particular organization of a machine for cutting paper boards, whereby the various parts were combined and adjusted so as to fit it to accomplish the specific result of cutting heavy paper in large sheets, and in a wet condition, as received from a paper-mak-

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| ing machine, and the reissue patent, No. 6,315, March 2, 1875, was for the process of sawing paper-boards in the wet state in which it was taken from the paper-making machine, <i>held</i> , that the reissued patent was not for the same invention as the original, and was therefore void even when restrained by construction to include only the process described when performed by means of the particular devices described, as it would still be broad enough to cover every arrangement, combination, and adjustment in which these devices may be found, and that is not the same invention which was described in the original patent. <i>Eachus v. Broom-all</i> | 176 |
| 29. Reissued letters patent, No. 6,954, J. Olmstead, February 29, 1876, Process (original No. 129,858, July 13, 1872,) Insulating Telegraph Wires, <i>held</i> , to consist in compressing the wax or other suitable material into the pores of the fibrous covering of the wire without scraping off any part of it. This process was anticipated by letters patent to Dundonald and to Baudouin in Great Britain, which describes the compressing of the wax, etc., to attain the same result, namely, the insulation of the wire. The patent, therefore, covers an old process applied to the same subject, with no change in the manner of applying it, and with no result substantially distinct in its nature. It cannot, therefore, be a valid patent. <i>Western Electric Mfg. Co. v. Ansonia Brass & Copper Co.</i> | 94 |
| 30. The difference between complainant's reissue, No. 6,954, and the Baudouin process consists merely in the use of a greater quantity of wax. This may be an improvement on the latter process, but it does not involve invention. <i>Western Electric Mfg. Co. v. Ansonia Brass & Copper Co.</i> | 94 |
| 31. Reissued letters patent, No. 6,955, J. Olmstead, February 24, 1876, Product (original No. 129,858, July 13, 1872,) Insulating Telegraph Wire, <i>held</i> , void in view of the void process patent. <i>Western Electric Mfg. Co. v. Ansonia Brass & Copper Co.</i> | 94 |
| 32. Where, through a mistake of the solicitor, letters patent, No. 62,502. September 3, 1867, Curtain-Fixtures, was issued with a broad claim to S. Hartshorn, the junior inventor, and letters patent, No. 69,176, September 24, 1867, Curtain-Fixtures, was issued with a limited claim to Wm. Campbell, the prior inventor, and both patents were reissued within two years of the discov- | |

- ery of the mistake, with an exchange of the claims, Hartshorn's as No. 7,370, October 31, 1876, and Campbell's as No. 7,367, October 31, 1876, *held*, that Campbell's acquiescence for nine or ten years in Hartshorn's original claim is regarded as an abandonment by him of any right to such claim, and he cannot resume the same. It is no answer to this view that the invention was not dedicated to the public by Campbell, because it was covered in the interim by Hartshorn's claim, since Hartshorn never had a right to the claim. As Campbell had the right to an interference with Hartshorn, when the original applications were pending, and did not avail himself of that right, but acquiesced in the claim of Hartshorn, he cannot afterward claim that which he voluntarily abandoned. *Hartshorn v. Saginaw Barrel Co.* 530
33. *Held*, further, that the specification in Campbell's original patent, No. 69,176, having been so changed in his reissue, No. 7,367, of October 31, 1876, as to admit of a claim which could not have been made in the original specification, that there has been a substantial alteration, and the claim based thereon is void. *Hartshorn v. Saginaw Barrel Co.* 530
34. The claim of Hartshorn's reissue, No. 7,370, of October 31, 1876, declared invalid, for the reason that it involved no invention in view of Campbell's prior invention being in fact a mere mechanical equivalent for that which was already covered by the Campbell patent. *Hartshorn v. Saginaw Barrel Co.* 530
35. Claim 1 of reissued letters patent, No. 8,060, Miller & Worley, January 29, 1878, Finishing Plug Tobacco, *held*, broader than the claim in the original, No. 185-119, December 5, 1876; if limited in conformity with the original to the described process of impressing letters or marks directly into the side of the plug during the finishing process, *held*, in view of the state of the art to be for applying a process of stamping tobacco, which was already well known, to the same tobacco, at a later stage in the process of manufacture, and is void for analogous use not involving invention, *held*, further anticipated by the Smith process. *Miller v. Foree* 193
36. *Held*, that claims 1 and 3 of the reissue (No. 8,589, C. F. Davis, February 18, 1868,) if construed broadly, could not lawfully have been granted on the original and would be invalid, in view of the delay of eleven years

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tion-brake to the periphery of the wheel, and that he believed the patent was entitled to cover different friction-clutch devices, so as to be a better protection against infringers." This was not regarded as proof of inadvertence or mistake in the original patent. *Newton v. Furst & Bradley Mfg. Co.* 450

42. Claim 2 of reissued letters patent, No. 9,094, G. Gardner, February 24, 1880, (original No. 127,045, May 21, 1872.) Chair Seat for "A chair seat made of laminæ of wood glued together with the grains in one layer crossing those of the next, concave on the upper surface, convex on the lower surface and perforated, as a new article of manufacture substantially, &c," construed and *held*, in view of the fact that the mode of construction of the article claimed, the material employed, the form after construction, and the purpose for which it was to be used had been described separately in earlier patents, although the article itself had never been described in any single patent, and to that extent was novel and was of great utility, that it did not require invention to produce it.

The statement of a new use that the chair seat was an independent article, formed and shaped as described, not found in the original patent, but imported into the reissue obtained after unreasonable delay, *held*, not to confer validity to the claim whose patentability rested upon such new use. *Gardner v. Herz* . . . 368

43. Reissued letters patent, No. 9,307, John F. Wollensak, July 20, 1880, (original No. 136,801, March 11, 1873,) for an Improvement in Transom-Lifters, which described broadly, "any construction, combination, or arrangement of parts which shall support the long or operating rod" for the purpose specified; *held*, that in view of the state of the art the claim must be regarded as a narrow one, and limited to the particular combination described, and not infringed by the defendant's, F. B. Reiher's device, secured to him by letters patent, No. 226,353, April 6, 1880, Transom-Lifter, satisfactorily shown by expert testimony to differ from Wollensak's device in that, proceeding from a different point in the state of the art it presents a different structure operating upon a totally different principle. *Wollensak v. Reiher* 145

44. The third and fourth claims of reissued letters patent, No. 9,901, granted to Davis, October 18, 1881, (original No. 202,158, April 9, 1878,) for Door Bolts, declared

- invalid on the ground that a delay of nearly three years after the date of the original patent before applying for its reissue with broader claims was not excused by the mistake of the solicitor who applied for and procured the original patent with claims more narrow than those which he was instructed by the inventor to make. *Ives v. Sargent* 512
45. *Held*, further, that an element of the invention (the pitman) shown in the original drawings only as a connected portion of a certain mechanism and so described in the original patent, but described in the reissue as an independent invention was new matter, and claims based thereon are invalid. *Ives v. Sargent* 512
46. Where the original letters patent, No. 178,916, G. W. Dunbar, June 20, 1876. Preserving Shrimp, covered the use of a textile fabric between the can and its contents, while the reissue, No. 9,957 of December 6, 1881. covered the use of an enveloping material for the shrimps between the can and the shrimps. *Held*, that this was a material expansion and enlargement, and the reissue was adjudged to be invalid. *White v. Dunbar* 397
47. Reissued letters patent, No. 10,047, I. W. McGaffey, February 28, 1882, Fountain Hose Carriage, in which the specification was exactly like that in the original, No. 163,188, October 10, 1876, but with different claims, the only material one of which was in these words: "1. The combined hose-carriage, and fountain-standard, consisting in the combination of the following elements, viz: a wheeled carriage provided with a foot or brace by means of which it may be sustained in an upright vertical position, a nozzle-holding device, and a reel of large diameter to allow the water to flow through the hose when partially wound thereon, substantially as specified," construed and *Held*, that the hose-reel, the standard, the brace, the nozzle-holder and their use in combination being all

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- but only what everyone has a right to use without his assistance. *Preston v. Manard* 249
48. To sustain this patent would be to deprive the public of the right to arrange and use a well-known apparatus in the only way in which its purpose can be beneficially accomplished. *Preston v. Manard* 249
49. Where original letters patent, No. 148,538, J. F. Wollensak, March 10, 1874, Transom-Lifter, which contained but two claims, was reissued after a delay of more than five years as No. 10,264, December 26, 1882, with seven additional claims, and it was of these that infringement was alleged, *held*, that admitting that the added claims were embraced by the original specification, nevertheless an inspection of the patent when issued would have informed the patentee that it failed to cover the area of his invention; and his failure to improve this opportunity with reasonable diligence, constitutes laches, and disables him in equity from enforcing his right to the detriment of those who have thereby been led to act as though it were abandoned. *Wollensak v. Reiher* 162

Partnership.

1. The plaintiff, as owner of the patent, is entitled to recover the damages in this case. He may be accountable to his co-partner for a part of them, but the co-partner could not sue on the patent, for such damages, or any part of them. *Yale Lock Mfg. Co. v. Sargent* . . . 275

Patents.

Interrrelation of Patents.

1. Two patents may both be valid when the second is an improvement on the first, but neither patentee can lawfully use the other's invention without his consent. *Cantrell v. Wallick* 322
- See Particular Patents, 19, 32.

Personal License.

See Employer and Employé, 2, 3.

Practice.

Equity Rule Eighteen.

1. *Quære*, whether the existing eighteenth rule in equity providing that after a decree *pro confesso* "the cause shall be proceeded in *ex parte*," intended a different practice in respect to the right of the defendant to appear before the master from that contemplated by the former rules, which did not contain this *ex parte* clause. *Thomson v. Wooster* 28

Affidavit.

1. Affidavits presented to the master or to the court below as grounds of the respective applications to reopen, the proofs cannot be looked into on this hearing on appeal. Thomson v. Wooster 28

Prior Invention.

1. Prior invention made out where a sample of the prior device is produced and identified by several witnesses whose characters for truth and veracity complainants have failed to substantially affect. Miller v. Foree . . . 193

Prior Use.

1. Although the prior use or knowledge of the invention claimed in a reissued patent is not specifically set up in the answer as a defence, it is nevertheless admissible to consult the evidence on that point contained in the record, for the purpose of defining the limits of the grant in the original patent and the scope of the invention described in the specification. Eachus v. Broomall 176
 2. To make out the defence of prior use and consequent want of novelty, the party setting it up must present not only a preponderance of proof, but proof beyond a reasonable doubt. Cantrell v. Wallick 322
- See Particular Patents, 17.

Process.

See Abandoned Experiment, 1 ; Combination, 3 ; Particular Patents, 28, 29 ; Process and Product, 1 ; Specification, 1.

Process and Product.*Interrelation of Process and Product.*

1. If the patent for the process is invalid, that for the product of the process is also. Western Electric Mfg. Co. v. Ansonia Brass & Copper Co. 94
- See Particular Patents, 31, 35 ; Specification, 1.

Product.

See Process and Product, 1 ; Specification, 1.

Profits.

1. Where on an accounting before a master it was objected that he allowed complainants the profits made by their patented machine for folding cloth as compared with folding by hand and there was no evidence produced of a folder open to the public adapted to the work done by defendants, the exception was overruled.

PAGE.

On objection that in estimating profits, the master did not take into account the fact that articles folded by others at a much lower rate than he had allowed, were articles of merchandise, *held*, that the evidence before the master did not show by what process such folded strips were made, nor whether they were not really made by infringing complainant's patent, and the exception was overruled. *Thomson v. Wooster* . . . 28

Reissue.

1. The fact that the reissue was applied for fourteen years after the date of the patent, if urged on defence against its validity, would have been strongly presumptive of unreasonable delay ; but it might possibly have been explained, and the court, which did not have the original patent before it, could not say, as a matter of law, that it was insusceptible of explanation. *Thomson v. Wooster* 28
2. To the argument that the bill avers that the validity of the original patent was established in numerous suits during the fourteen years prior to reissue, thereby averring, substantially, that it was valid and operative, and that therefore the reissue, which is dependent on the invalidity or inoperativeness of the original patent, is void, the answer is that these suits may have pertained to parts of the invention as to which the specification was clear, full, and sufficient and the court cannot say as mere matter of law, that there was not defectiveness or insufficiency in the specification relating to other parts of the invention, or modes of using it and putting it into operation, which were not noticed until the application for reissue was made. *Thomson v. Wooster* 28
3. The averment in the bill that complainant had presented to the Patent Office a full statement of the facts connected with the delay in securing their reissue, and that the Examiner-in-Chief had decided that he had satisfactorily explained the delay and was entitled to reissue, is not enough. The Patent Office expressly or implicitly decides the question of diligence in every case of reissue ; but the very question for judicial review is whether the Patent Office has decided rightly, and the special circumstances held to have excused the delay should have been set out. *Wollensak v. Reiher* 162
4. The settled rule is, where the claim is merely expanded,

- PAGE.
- that a delay for more than two years in applying for reissue, invalidates the reissue, unless such delay is accounted for and excused by special circumstances. *Wollensak v. Reiher* 162
5. When the injunction bill set out both the original and the reissued patent, and it appears from inspection that the sole object of the reissue was to enlarge or expand the claims of the original, and that a delay of two or more years has taken place in applying for the reissue, not explained by special circumstances showing it to be reasonable, the question of laches is a question of law arising on the face of the bill, which avails as a defence upon a general demurrer for want of equity. *Wollensak v. Reiher* 162
6. While rights of other parties intervening between the original patent and its reissue may illustrate the evil consequences of improper reissues, they add nothing to its illegality, which is determined from general principles of law applied to the statutes. *White v. Dunbar* 397
7. In a suit upon a reissued patent the allegations of invalidity of the reissue must be proved, and the original patent is material evidence for the purpose of comparison with the reissue. *Clark v. Wooster* 426
- See *Costs*, 1 ; *Particular Patents*, 24-47 ; *Prior Use*, 1.

Reversal.

See *Jurisdiction*, 5.

Right to Use.

See *Patents*, 1.

Scope of Patent.

See *Claim*, 2 ; *Particular Patents*, 47, 48 ; *Prior Use*, 1.

Service of Process.

See *Bill in Equity*, 2.

Specification.

1. Where instead of describing in his process specification the cooling of the paraffine or wax before compressing, he mentioned as a quality of the product, the polished appearance of the surface, and asked the court to infer the process from that quality, and it was not even referred to in the claim ; *held*, that such a vague and inverted method of description was not a compliance with the statute, and could not therefore be held to be cov-

	PAGE.
ered by the patent. Western Electric Mfg. Co. v. An- sonia Brass and Copper Co.	94
See Claim, 4 ; Invention, 2.	

State of the Art.

1. Prior patents not set up in the answer may be introduced in evidence to show the state of the art and aid in the construction of the plaintiff's claim, though not to in- validate that claim on the ground of want of novelty when properly construed. Doctrine in Vance v. Camp- bell, 1 Black, 427, 430 [7 Am. & Eng. 117,] and similar cases, affirmed. Grier v. Wilt	558
See Claim, 6 ; Identity, 1 ; Particular Patents, 6.	

"Substantially as Described."

1. The words "substantially as described" in certain claims, <i>held</i> , properly to limit them to the mechanism de- scribed. Brown v. Davis	212
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Substitution.

Substitution of Equivalent Invention.

See Particular Patents, 34.

Void Patent.

See Particular Patents, 9, 13, 16, 18, 25, 26, 28, 29, 31, 32, 33,
34, 35, 38, 39, 40, 44, 45, 46 ; Process and Product, 1.

INDEX TO NOTES IN THIS VOLUME.

	PAGE
Abandonment.	
Acquiescence in abandonment	555
" Accident, Inadvertence, or Mistake."	
" Accident, inadvertence, or mistake."	466
Of solicitors	467
Adverse Rights.	
Reissue where adverse rights have accrued	233
Aggregation.	
Aggregation	90, 117
Amendments to Application.	
Amendments to application as evidence in the construction of the patent	498
Analogous Use.	
Process void for analogous use	201
Change in Size.	
Change in size does not involve invention	448
Claim.	
Patentee is bound by his claim	246
Specification cannot expand claim	409
Statutory requirement of a claim	409
Combination.	
Want of novelty must be addressed to the combination, not to the separate parts	333
Construction of Claim.	
Mechanical combination claims cannot be construed to be for a process	190
"Substantially as described." Effect on construction of claim	232

	PAGE.
Construction of Patent.	
Amendments to application as evidence in the construction of the patent	498
Contract.	
Limitation of employer's right to the invention under con- tract with inventor	423
Contractor.	
Employer's liability for profits where his contractor infringes	424
Damages.	
License fee as measure of damages	438
Delay.	
Delay in reissuing	172
Description.	
Sufficient description of process	103
Device Improved Upon.	
Improvement gives no title to use device improved upon . .	334
Diligence.	
Diligence in filing disclaimer	300
Disclaimer.	
Diligence in filing disclaimer	300
Reissue for matter disclaimed or rejected with patentee's ac- quiescence, invalid	117
Employer	
Employer's liability for profits where his contractor infringes	424
Employer and Employe.	
Relations of employer and employé with regard to origin of the invention	423
Limitation of employer's right to the invention under con- tract with inventor	423
Implied license from employé to employer	423
Evidence.	
Original patent in evidence on the question of identity with reissue	48, 437
Amendments to application as evidence in the construction of the patent	498
Evidence of the state of the art admissible without notice .	189
The court cannot instruct the jury that evidence of the fact disputed proves it	366

Expiration of Patent.

Expiration of patent cannot defeat jurisdiction—If alive when
bill was filed 437

Expired Patent.

Expired patent—Want of jurisdiction 437

Form.

Where form is of the essence of the invention, change of form
is no infringement 142
Form—When infringed 143

Identity of Original and Reissue.

Original patent in evidence on the question of identity with
reissue 48, 437

Improvement.

Patentability of an improvement 334
Improvement gives no title to use device improved upon . . 334

Infringement.

Where form is of the essence of the invention, change of form
is no infringement 142
Form—When infringed 143

Instructions to Jury.

The court cannot instruct the jury that evidence of the fact
disputed proves it 366

Invention.

"Complete invention" 232
Change in size does not involve invention 448

Inventor's Consent.

Use by employer with inventor's consent defeats the patent. 423

Jurisdiction.

Expiration of patent cannot defeat jurisdiction—if alive when
bill was filed 437
Expired patent—want of jurisdiction 437

Liability of Employer.

Employer's liability for profits where his contractor infringes 424

License.

Implied license from employé to employer 423

	PAGE.
License-Fee.	
License-fee as measure of damages	438
Absence of license fees, royalty, &c.	300
Machine.	
Reissue of a machine patent to cover process	190
Mechanical Combination Claim.	
Mechanical combination claims cannot be construed to be for a process	190, 584
Mistake of Solicitor.	
Correction by reissue of solicitor's mistake	527, 555
Notice.	
Evidence of the state of the art admissible without notice	189
Novelty.	
Unpatentable novelty	387
Want of novelty must be addressed to the combination, not to the separate parts	333
Object of Invention.	
Statement of object of invention—effect on reissue claims	409
Origin of Invention.	
Relations of employer and employé with regard to origin of the invention	423
Patentability.	
Patentability of an improvement	334
Patentee.	
Patentee is bound by his claim	246
Partnership.	
Partnership accountability	300
Process.	
Sufficient description of process	103
If process is void, product is also void	103
Process void for analogous use	201
Mechanical combination claims cannot be construed to be for a process	190, 584
Reissue of a machine patent to cover process	190
Product.	
If process is void, product is also void	103

	PAGE.
Profits.	
Employer's liability for profits where his contractor infringes . . .	424
Reissue.	
Original patent in evidence on the question of identity with reissue	48
Statement of object of invention—effect on reissue claims . . .	409
Reissue for matter disclaimed or rejected with patentee's ac- quiescence, invalid	117
Delay in reissuing	172
Reissue of a machine patent to cover process	190
Reissue where adverse rights have accrued	233
Correction by reissue of solicitor's mistake	527, 555
Right to Use.	
Improvement gives no title to use device improved upon . . .	334
Royalty.	
Absence of license fee, royalty, &c.	300
Special Defences.	
Special defences that may be made to a patent considered. . .	387
Specification.	
Specification cannot expand claim	409
State of the Art.	
Evidence of the state of the art admissible without notice . .	189
Statutory Requirement.	
Statutory requirement of a claim	409
"Substantially as Described."	
"Substantially as described." Effect on construction of claim	232
Use by Employer.	
Use by employer with inventor's consent defeats the patent . .	423

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